

The predictive value of a  
Battery of standardized tests  
for selection of students for a  
school of practical nursing  
Elizabeth Corson Belcher





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Thesis

THE PREDICTIVE VALUE OF A BATTERY OF STANDARDIZED TESTS  
FOR SELECTION OF STUDENTS FOR A SCHOOL OF PRACTICAL NURSING

Submitted by

Elizabeth Corson Belcher

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First Reader: J. Wendell Yeo, Professor of Education  
Second Reader: Warren T. Powell, Director of Student Counseling  
Third Reader: Howard L. Kingsley, Professor of Education

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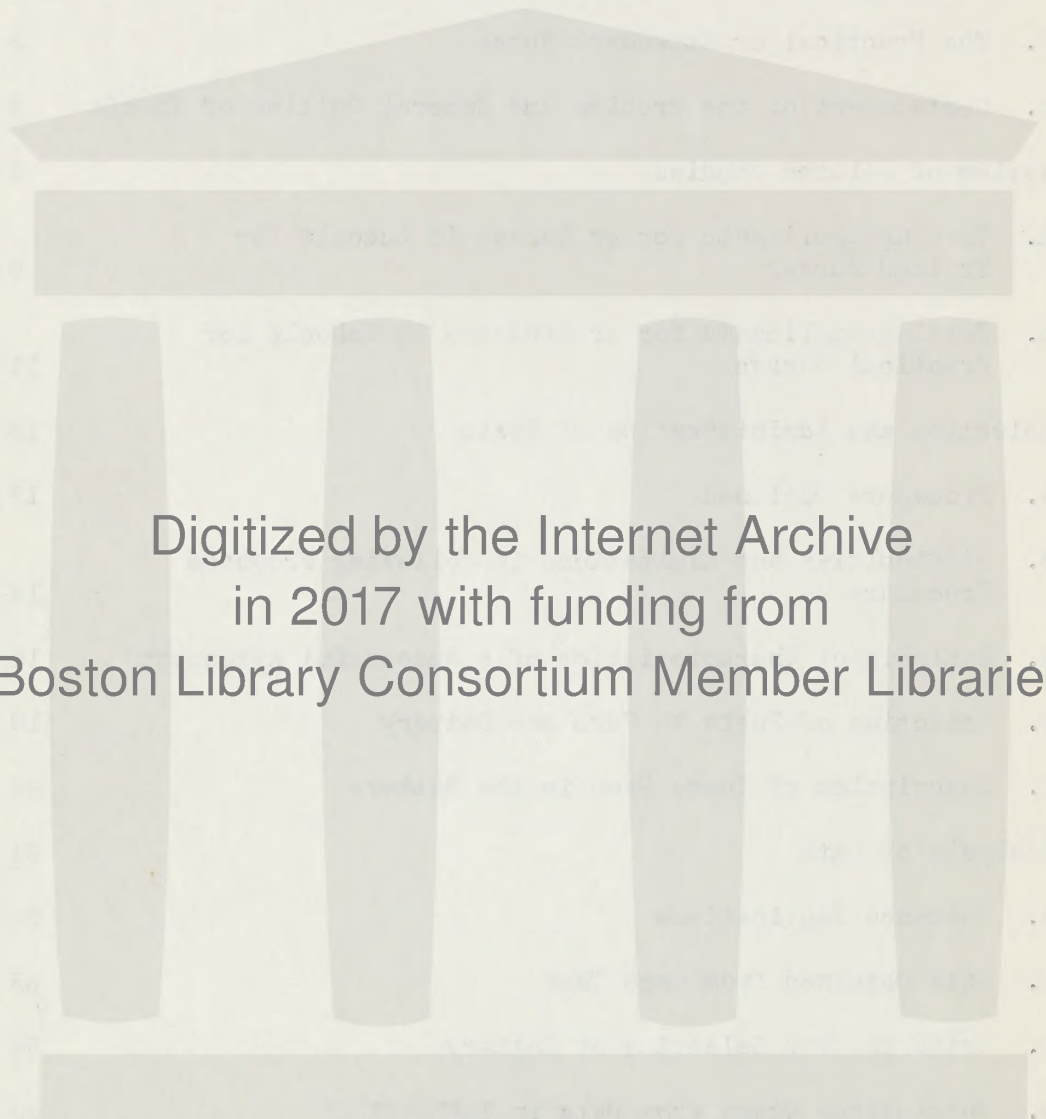
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## CHAPTER I

### THE PROBLEM

#### Statement of the Problem

The Household Nursing Association has, since 1917, conducted a training school for attendant nursing. Each year it has been necessary for a number of students to be dropped from the course. Recognizing that the withdrawal of students after training has started is wasteful for both the students and the school, the latter determined that these should be reduced to a minimum. In an effort to do this, the idea of using a battery of standardized, objective tests as an aid in the selection of students was conceived. If through these, the potentially successful attendant nurse could be ascertained, and, concurrently, the potential failure, the former could be admitted, the latter excluded, from the school.

The purpose of this study was, therefore, to assemble a battery of standardized, objective tests which purport to measure those aptitudes generally agreed to be characteristic of the successful attendant nurse and to determine their predictive value in signalling out the successful nurse.

#### The Household Nursing Association Training School

When and why founded.--In April, 1918, a training school for "practical" nurses was founded in Boston. Until that time the only school for such nurses was the Mutual Aid Association in Brattleboro, Vermont. Since that time, however, many schools have been established to train girls and women to do the type of nursing for which the trained, registered nurse

CHAPTER I  
THE PROBLEM

Statement of the Problem

The International Nursing Association was, since 1917, conducting a training school for advanced nursing. Each year it has been necessary for a number of students to be dropped from the course. Frequently the withdrawal of students after training has started is reported for both the students and the school, the latter maintaining that there should be no reason to a student. In an effort to do this, the loss of nursing activity of a student, objected to as an aid in the training of students as conceived. If through these, the possibility of nursing as a career could be established, and, consequently, the potential of nursing, the former could be utilized, the latter would, from the point of view of this study, therefore, be secured. A better of understanding, objective facts which suggest to nursing that education generally agreed to be characteristic of the successful student nurse and to determine their productive value in training and the successful nurse.

The International Nursing Association Training School  
How and why formed -- In April, 1917, a training school for "nurses" was formed in Boston. Until that time the only school for nurses was the General Hospital Association in Philadelphia, Pennsylvania. Since that time, however, many schools have been established to train this type of nurse in the type of nursing for which the training, respectively, was



is not necessary. Among the better known of such schools are the Ballard School in New York City, The School of Practical Nursing in Rochester, New York, and the Program for Home Nursing Aides in Detroit.

The Household Nursing Association Training School for Attendant Nursing was founded by the Women's Municipal League of Boston after seven years' experience with placement of ungraded practical nurses had made it obvious that a simple, basic training was essential for the satisfactory functioning of a registry. Starting in 1918, at a time when there was a serious shortage of trained nurses due to the demand for their services both over-seas and in military hospitals in this country, the school has continued to grow and to meet the constant demand for the services of the well-trained attendant who can do simple nursing and care for the household.

Present status.--When the school was founded in 1918, seven students made up the first class. In January, 1941, there were one hundred and nine students in the school. Incorporated as a non-profit making institution, the Household Nursing Association is supported in part by the Community Federation of Greater Boston. It derives only a very small part of its income from the tuition charged, but a somewhat larger part from the Brittany Coffee Shop, run in connection with the school, and from registration fees. The fact that the school maintains its own Registry is of great importance both to the public and the students. The school stands unqualifiedly behind the attendants placed through its own Registry. The public is thus guaranteed a standard of service; the attendants are guaranteed standards of employment--hours, wages, conditions of work.

is not necessary. Among the better known of such schools are the Ballard School in New York City, the School of Practical Nursing in Rochester, New York, and the Program for Home Nursing Aides in Detroit. The Hospital Nursing Association Training School for Students Nurses was founded by the Women's Hospital League of Boston about seven years ago, and with placement of graduates practically assured and with its objective that a single nurse training was essential for the satisfaction of a hospital. Starting in 1918, at a time when there was a serious shortage of trained nurses due to the demand for their services both at home and in military hospitals in this country, the school has continued to grow and to meet the constant demand for the services of a well-trained attendant who can do single nursing and care for the house-

Practical Nursing.—When the school was founded in 1918, seven students made up the first class. In January, 1921, there were one hundred and nine students in the school. Incorporated as a non-profit making institution, the Hospital Nursing Association is supported in part by the Community Federation of Greater Boston. It believes only a very small part of the income from the tuition charged, but a somewhat larger part from the Bridge Street House, with its connection with the school, and two registration fees. The Hospital Nursing Association is the agency for the placement of graduates both in the public and the private. The school stands especially behind the arrangements placed through the Red Cross, and it is thus guaranteed a standard of service and attendance and the highest standards of equipment, hours, wages, conditions of work.



### The Practical or Attendant Nurse

General definition.--That there is a growing effort to standardize all professions and many semi-professions is evident from even a cursory glance at the work of such groups as the American Medical Association, the American Association of Social Workers, the American Society of Clinical Pathologists, and the American Registry of X-Ray Technicians. The nursing profession is no exception. After many years of effort, sound professional and legal standards for the protection of the nurse and for the public in the employment of the nurse have been attained.

An effort is now being made to provide definite information regarding the extent and limitations of the field of practice for subsidiary workers, of which the practical or attendant nurse is one. This effort is centralized in the Joint Boards of Directors of the American Nurses' Association, National League of Nursing Education, and National Organization for Public Health Nursing. In a report of this committee they state that, "The term 'subsidiary workers' includes all persons, other than graduate registered nurses, who are employed in the care of the sick such as so-called 'practical nurses,' attendants, trained attendants, licensed attendants, licensed undergraduate nurses, licensed practical nurses, ward helpers and orderlies, nurses' aides, nursing aides, etc."<sup>1</sup> It is evident that there are as many names for the nurse who is not a registered graduate nurse as there are people doing such work. For that reason and because

---

<sup>1</sup>/ Report of the Joint Committee to Outline Principles and Policies for the Control of Subsidiary Workers in the Care of the Sick, p.4.

# The Position of Registered Nurses

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Report of the Joint Board of Directors of the American Nurses' Association,  
 National League of Nursing Education, and National Organization for Public Health Nursing.



this study has been made on and for the particular group of subsidiary workers trained by the Household Nursing Association Training School, the term "attendant" is used throughout this study and is defined below in terms of the training given this group and the purpose of the training as defined by the school.

The attendant nurse as defined by the Household Nursing Association School for Attendant Nursing.--The Household Nursing Association was incorporated in 1912, "for the purpose of providing nursing and care of the household in cases of sickness and ill health, especially in families of moderate means, and doing everything incidental to and tending to promote this purpose."<sup>1</sup> The Training School, opened in 1918, gave a course of four months' hospital training and six weeks' household training,

"For the care of sickness in the home"

"For the care of the home during sickness"<sup>2</sup>

The present course consists of twelve months' hospital training and two months' household training in the practice house. This is followed by six months' work in private homes under the supervision of registered nurses on the Staff of the Association. The purpose of the School still remains to "care for mildly ill or chronic patients and to manage a household when the circumstances of the family make it necessary."<sup>3</sup> The School strongly emphasizes the fact that its graduates are not prepared "to

<sup>1</sup>Review of the Year 1940, Report of the Household Nursing Association. p.2.

<sup>2</sup>Ibid., p.2.

<sup>3</sup>Flier prepared by The Household Nursing Association to describe the course.

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the household in cases of sickness and ill health, especially in families  
of moderate means, and doing everything incidental to and resulting in  
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Director of the Year 1920, report of the Household Nursing Association on page

1016, p. 2.

Notes prepared by the Household Nursing Association to describe the course.



assist the physician at operations or confinements or to care for serious illness or contagious diseases."<sup>1</sup> These, therefore, are, broadly, the duties and responsibilities of the attendant nurse.

#### Restatement of the Problem and General Outline of Thesis

As stated in the opening paragraph of this chapter, The Household Nursing Association realizes that it is wasteful both to the School and to the student in terms of time and money for a student to enter the School and have to withdraw before completing the course. During the school year from September 1940 to June 1941, for example, 27 per cent of the students were unable for various reasons to complete their training. In a few cases, personal matters, such as illness at home or financial difficulties, made the student's withdrawal mandatory. In by far the largest number of cases the drop-outs were due to the students' inability to keep up mentally, physically, or emotionally the sustained effort necessary to complete the course satisfactorily.

It has never been even remotely conceived that through the additional help which a selective battery of tests might give, all those potential failures could be discovered. It has been and is the hope of those working on this problem that by eliminating the potentially unsuccessful nurse, as determined by this battery, the percentage of subsequent failures can be greatly reduced.

The chapters which follow report the steps taken to assemble such a battery, the administration of it to a group of graduate attendant nurses, and an analysis of the results obtained, together with conclusions drawn by the writer.

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<sup>1</sup>

Flier prepared by The Household Nursing Association to describe the course.

against the physician as operator or confederate or to care for various illnesses or contagious diseases. These, however, are, broadly, the duties and responsibilities of the attendant nurse.

### Responsibilities of the Physician and Nurse in the Hospital

As stated in the opening paragraph of this chapter, the hospital during its history has been a place where it is necessary both for the patient and for the physician to have a certain amount of knowledge in order to be able to handle the situation. It is true that the patient is often in a position to order the physician and have to wait for the physician to come. During the past few years there has been a tendency for the physician to be more of a consultant than a manager. For example, in 1941, for example, 27 per cent of the students were unable for various reasons to complete their training. In a few cases, personal matters, such as illness at home or financial difficulties, made the student's situation impossible. In the last few years, however, the student's situation has been such that the student's inability to keep up mentally, physically, or emotionally, the medical effort necessary to complete the course satisfactorily.

It has never been more seriously considered than through the student's help which a considerable number of students give. All these potential failures could be discovered. It has been and is the hope of those working on this problem that by eliminating the potential failures, as determined by the history, the percentage of successful failures can be greatly reduced.

The chapter which follows reports the steps taken to research and to determine the contribution of it to a group of students attending courses and an analysis of the results obtained, together with conclusions drawn by the writer.



## CHAPTER II

### REVIEW OF RELATED STUDIES

Testing applicants for or nurses in schools for trained nurses

The possibility of administering psychometric tests to determine the potentially successful nurse is not a new conception. As early as 1924, Young had reported on the results of testing one hundred and one student nurses in the Indiana University Training School for Nurses with the Indiana University Mental Survey Schedule D.<sup>1</sup> In 1926 Mary Earle reported a study in which the Army Alpha scores for two hundred and twelve student nurses in seven hospitals in New York City were studied to discover whether there was any correlation between their general intelligence and their personality and character traits.<sup>2</sup> In February 1928 A.H. MacPhail reported that the Committee on Nurses from the Board of Trustees of the Rhode Island Hospital had initiated a program of psychometric tests for students in training for the purpose of discovering "what diagnostic or prognostic value such tests might possess."<sup>3</sup>

These were, of course, just the beginnings, so that it is not to be wondered that South and Clark, writing in 1929 on the uses of psychological tests in schools of nursing, state that "A search of literature reveals

<sup>1</sup>H.H. Young, "Intelligence Rating and Success in Nurses' Training," Journal of Applied Psychology, VIII (December, 1924), pp. 377-389.

<sup>2</sup>"Relation between Personality, Character Traits and Intelligence," Journal of Applied Psychology, X (December, 1926), pp. 453-461.

<sup>3</sup>"Psychological Tests Applied to Nurses in Training at the Rhode Island Hospital," American Journal of Nursing, XXIX (February, 1929), p. 203.





that little use has been made of such tests in schools of nursing. Where such attempts have been made we find that the intelligence test has been used almost entirely."<sup>1</sup> In 1935 the same authors wrote a report based on a study of the Ohio State University Psychological Examination which had been given to students admitted to nine schools of nursing during the years 1929-1931 inclusive. The authors conclude, in part, that "In judging the aptitude of individual students, the scores most useful in predicting success in the order of their importance are as follows:

<sup>1</sup> Arithmetic    <sup>2</sup> Word Knowledge    <sup>3</sup> Reading Ability    <sup>4</sup> Accuracy

<sup>5</sup> Total raw scores."<sup>2</sup>

Dr. Malcolm S. MacLean, speaking in Milwaukee at the Institute on Supervision of the Wisconsin State League of Nursing Education, made an impassioned plea to the nursing school to "resort to technics now being used in many colleges and universities for the finer and sharper winnowing, sorting, screening, and selection" of those admitted for training.<sup>3</sup> In concluding Dr. MacLean said he was "convinced, if you follow the battery-test objective-analysis program, that your student failures will be brought to a minimum."<sup>4</sup>

<sup>1</sup> Earl B. South, and Genevieve Y. Clark, "Some Uses of Psychological Tests in Schools of Nursing," American Journal of Nursing, XXIX (December, 1929), p. 1495.

<sup>2</sup> "Some Suggestions for Measuring Nursing Aptitude," American Journal of Nursing, XXXV (September, 1935), p. 871.

<sup>3</sup> "The Selection of Student Nurses and the Treatment of Failures," American Journal of Nursing, XXXII (December, 1932), p. 1297.

<sup>4</sup> Ibid., p. 1307.





In reporting the results of the testing program at Rex Hospital in Raleigh, North Carolina, Garrison refers to a report of Jones and Iffert<sup>1</sup> which, he says, "showed that interest test scores did not correlate at all closely with ratings used as criteria of success in the practical work of a training course."<sup>2</sup>

By far the most comprehensive study made in the first part of the last decade was that of Elsie O. Bregman who reported the performance on standard tests of intelligence of more than ten thousand students of nursing while in attendance at accredited schools of nursing in the United States.<sup>3</sup> She draws certain conclusions as to the intellectual level and range of intelligence found among the nurses; the extent to which they compare with high school graduates, college freshmen, and students in normal schools; the differences in intellectual ability between student nurses in training schools requiring high school graduation for admission and those which do not. Since this report was published in 1933, the standards for entrance to all accredited schools of nursing have been raised. The study is important from an historical point of view rather than pertinent to the present situation.

A more recent study, referred to above, was that of K.C. Garrison, at Rex Hospital, North Carolina. He reported that four tests were ad-

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<sup>1</sup> W.B. Jones, and R.E. Iffert, Fitness for Nursing: A Study in Selection, Bureau of Educational Records and Research, 1933. Pittsburgh.

<sup>2</sup> K.C. Garrison, "Use of Psychological Tests in the Selection of Student-nurses," Journal of Applied Psychology, XXIII (August, 1939), p. 462.

<sup>3</sup> Elsie O. Bregman, Performance of Student Nurses on Tests of Intelligence, Nursing Education Bulletin, Teachers College, 1933.

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<sup>1</sup> E. C. Gregory, and E. E. Lyster, "Intelligence in Nursing: A Study in Relation  
 to Entrance to Accredited Schools of Nursing," *Journal of Educational Psychology*,  
 26 (1935), 1-10.  
<sup>2</sup> E. C. Gregory, "The Intelligence of Nurses in the United States of America,"  
*Journal of Educational Psychology*, 26 (1935), 1-10.  
<sup>3</sup> E. C. Gregory, "Intelligence of Nurses in the United States of America,"  
*Journal of Educational Psychology*, 26 (1935), 1-10.



ministered to the incoming nurses in the fall of 1937-38 in an effort "to select student-nurses that have the aptitude to do the work required and at the same time possess personality traits that will enable them to adjust satisfactorily to nursing activities."<sup>1</sup> The tests administered were the Otis S-A, the Bernreuter, Iowa Reading, and Detroit Mechanical. The results obtained on these were studied in relation to certain academic grades, grades on practical work, and the nurse's Efficiency Record. Garrison concludes that "a keen mind.....is relatively less important than are the aptitudes for developing a well-balanced personality and for acquiring the traits, knowledge, and skills that are essential for the doing of the work."<sup>2</sup>

Another comprehensive study was reported by Williamson. In 1934 the Minnesota League of Nursing Education appointed a committee on testing to supervise a program of research designed to yield improved methods of selecting students for the private schools of nursing in the state. This committee obtained the services of the University of Minnesota's Testing Bureau in carrying out the program. Students enrolling in some twenty schools in the fall of 1934, the winter of 1935, and the fall of 1935, were tested with a battery composed of the eight tests listed below.

- (1) College Aptitude Test (Cooperative Vocabulary)
- (2) Moss Nursing Aptitude Test
- (3) Cooperative English Test (Usage and Spelling)
- (4) Cooperative General Science Test
- (5) Otis Mental Ability Test
- (6) Gordon's Nurses Fractions Test
- (7) Minnesota Vocational Test for Clerical Workers
- (8) Monroe Fractions Test

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<sup>1</sup> K.C. Garrison, op. cit., p. 461.

<sup>2</sup> Ibid., p. 465.





At the close of the first year of instruction, these tests were correlated against each student's grades in the various subjects of instruction. Most of the correlations obtained were low, but indicate some relationship between test scores and the criteria. It is interesting to note, in view of the fact that the Minnesota Vocational Test for Clerical Workers was included in the present study, that Williamson gave this test only to the students entering in the fall of 1934 and in the winter of 1935. In reporting on this, Williamson says, "The coefficients between the two sections of the Clerical Aptitude Test and the criteria are so low that they were not administered to the group entering in the fall of 1935."<sup>1</sup> In concluding his report on this testing program, Williamson says that "we are justified in assuming that tests could be used to great advantage in selecting candidates for nursing training if instructors' grades were more valid."<sup>2</sup>

A current program of testing is now being carried on under the auspices of H. Louise Aul, Director of Nursing Training at Massillon State Hospital, Massillon, Ohio. A large battery of tests, which are described more fully in Chapter III, is given to all applicants to the school. Miss Aul reports that "The Psychometric Chart [which shows the individual test results] is used constantly by the teaching staff to aid the student in her weak point. There is still much to do, we think we have made a small beginning....In our last class we had for the first time no personality problems."<sup>3</sup>

Studies made in the past, however, will in all probability be of historical rather than practical value when the program now being carried on by the Psychological Corporation is completed. Miss Edith M. Potts, Director of the Nurse Testing Division, has supervised the program which

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<sup>1</sup>E.G. Williamson, et al, "Selection of Student Nurses," Journal of Applied Psychology, XXII (April, 1938), p. 121.

<sup>2</sup>Ibid., p. 130.

<sup>3</sup>Personal letter from H. Louise Aul, dated January 6, 1941.





includes the testing of all applicants to certain schools of nursing. A preliminary report has been made by Miss Potts on two thousand cases. She concludes that "it would seem both desirable and economical to add to our other knowledge gained by having administered a well-chosen group of tests which are interpreted against the background of knowledge of the success of other previous applicants and other students previously admitted to the schools."<sup>1</sup>

#### Testing applicants for or students in schools for practical nurses

All the studies referred to above have dealt with applicants for or students in schools for registered nurses. A search of the literature and inquiry of those working with practical or attendant nurses, as well as experts in the field of testing, reveals only two studies in this field. To the first group of students to enter the Rochester (New York) School of Practical Nursing in January 1939 was given a battery of tests which included the Army Alpha, Iowa Reading, and Bernreuter Personality Inventory. As there were only fifteen students in this class and as three of them did not complete the entire battery, no valid deductions could be drawn. Miss Isabel H. Dill, Director of the School, pointed out that "It is interesting to note that the pupil standing highest on the Alpha Test was lowest in the Practical Exam given by the State...."<sup>2</sup>

Miss Dill further states that from her experience in the Rochester School, she feels that "a general intelligence test, such as the Alpha and the Iowa Reading Test, have some value in predicting success of the applicant, but the Bernreuter Personality Inventory has not proven very re-

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<sup>1</sup>E.M. Potts, "Selection of Student Nurses," American Journal of Nursing, XXXI (May, 1941), p. 597.

<sup>2</sup>Personal letter from I.H. Dill, dated April 9, 1941.





liable to us....I am convinced that no tests have been constructed that are very helpful in selecting candidates who will be successful in the field of nursing. There seems to be some intangible quality that cannot be tested."<sup>1</sup>

It is very encouraging to those interested in the possibility of using psychometric tests to predict success or failure for the practical as well as the registered nurse to know that Miss Edith Potts, who is supervising the Psychological Corporation's testing program for applicants for training for registered nurses, is also supervising a study for practical nurses. This is being carried on in collaboration with the Ballard School of Practical Nursing in New York. No report of the results has yet been published.

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<sup>1</sup>Personal letter from I.H. Dill, dated April 9, 1941.





### CHAPTER III

#### SELECTION AND ADMINISTRATION OF TESTS

##### Procedure Outlined

At the initiation of this study, the following steps were planned as a basis for procedure:

1. An analysis of the characteristics of a successful attendant nurse.
2. The selection of a battery of standardized, objective tests which would measure, so far as could be determined, those characteristics.
3. The administration of this battery to at least one hundred graduate attendant nurses who would range, according to the criteria of the School, from very successful to acceptable to poor.
4. An analysis of the test scores, by the inter-correlation method, to ascertain which, if any, of these tests selected the successful nurse consistently enough to warrant the inclusion of the test in a battery of tests to be given each entering student.

As a corollary to this study, the original battery was to be given to each of several incoming classes, so that, after the students had graduated, each could be classified as in step 3, and an analysis made of the test scores, as outlined in step 4. Four incoming classes have been so tested and a preliminary report is being prepared of the results obtained.





### Difficulties and limitations in following proposed procedure

That these steps could not be carried out in their entirety is due to several factors which could not be anticipated and could not be controlled. Paramount among these was the difficulty of securing a satisfactory number of graduate attendants to test. A letter sent out by the School to enlist the cooperation of the graduates in taking the tests brought an excellent response. However, the practical difficulty involved in getting a large group together at one time made it necessary to do the testing in several small groups. Even in these groups there were usually some individuals unable to stay for the entire testing period. In the end, the number of graduates who took the test was 55, and of this group four were unable to complete the entire battery.

In addition to the difficulty of finding graduates free to take the tests, was that of finding graduates who could be rated "very successful," "acceptable," and "poor." It finally became necessary to administer the battery in several sections to all those who were free and willing to take it. That this meant real cooperation on the part of the attendants should be recognized. Not only did they give up their free time on two or three days, but they often made long trips to the School from quite distant parts of the city. Their cooperation and, in general, pleasant spirit reflects well on their training and loyalty to the School.

Undoubtedly one reason that the School was able to secure the cooperation of this group of graduates was its promise that the test results would be reported to the School authorities only in the form of general summaries. This unquestionably increased the reliability of the test scores.





## Analysis of Characteristics of Successful Attendant

In determining those qualifications which characterize the successful attendant nurse, two methods were considered: one, analyzing the characteristics of those graduates whom the School considered successful; second, analyzing the characteristics which those who train or those who work professionally with attendants consider essential. The first method was dismissed from consideration in view of the practical difficulties involved. The second method was comparatively simple to follow, due to the fact that both the Household Nursing Association and the Joint Committee (see page 3) had already published lists of some of the qualifications they considered essential. These qualifications are listed in the chart on the following page.

It is obvious from even the most cursory glance at this chart that those characteristics considered essential for the successful nurse lie, almost entirely, in the field of personality and interest. The exception is health, which is, of course, readily determined by medical and physical examinations. That personality and interest are the most important factors was emphasized to the writer in her discussions with the Director and Assistant Director of the School and with one of the School's chief medical advisors. The latter expressed particular satisfaction at the inclusion of the Washburne S-A Inventory in the test battery, pointing out question after question which he believed measured the type of behavior he considered pertinent in judging the value of an attendant.

This emphasis on personality is further corroborated by the fact that the Ballard School in New York and the School of Practical Nursing in Rochester, as well as the Household Nursing Association, require





SOME OF THE QUALIFICATIONS  
CONSIDERED ESSENTIAL IN AN ATTENDANT  
BY THE  
JOINT COMMITTEE<sup>1</sup> AND THE HOUSEHOLD NURSING ASSOCIATION<sup>2</sup>

JOINT COMMITTEE	HOUSEHOLD NURSING ASSOCIATION
Good health	Health and endurance
No serious physical handicap	Like people and get along well with them
Willingness and ability to do housework	Pleasant disposition
Pleasing personality	Sense of humor helpful
Understanding of own limitations but enough self-confidence to give family confidence in her	Loyalty
	Obedience
	Truthfulness
Attention to personal hygiene and neat, clean appearance	Economy
Sympathetic understanding of problems of the family	
Sense of humor and ability to get along well with people, but maintain dignity and avoid gossip	

<sup>1</sup> Joint Committee from the Joint Board of Directors of the American Nurses Association National League of Nursing Education and National Organization for Public Health Nursing, "Report of the Joint Committee to Outline Principles and Policies for the Control of Subsidiary Workers in the Care of the Sick," p. 9.

<sup>2</sup> Katharine Shepard, and Charles H. Lawrence, Textbook of Attendant Nursing, p. 365.





interviews with the applicant before she is admitted to the School as a means of judging her personal qualities. Such emphasis is also found in the requirements set forth by the Program for Home Nursing Aides in Detroit, a community project for training, placing and supervision of subsidiary workers in homes. Admittance to the course requires that the applicant be alert, emotionally stable, able to get along with people. "Attention," says Leora Stroup, Coordinator of the Program, "is given to... general attitude of cheerfulness and optimism and general manner and attitude."<sup>1</sup>

Other writers, studying the use of psychometric tests for trained nurses, confirm this. Catharine Miles, at the time Clinical Professor of Psychology at the Institute of Human Relations at Yale University, speaking before the Education Section of the Connecticut State Nurses' Association, listed ten qualifications for a good nurse. Of these, all but three were traits of personality or interest. As a basis for selection for entrance to a nursing school, she suggested measurement of persistence, endurance and ambition as rated by school marks in schools where the marks are most meaningful; intelligence ratings, which help to indicate capacity for progress at a higher educational level than that already reached; and personality and interest ratings.<sup>2</sup>

Reference has already been made to Garrison's report of tests given at Rex Hospital, Raleigh, North Carolina, in which he states that a keen mind is "relatively less important than are the aptitudes for developing a well-balanced personality..."<sup>3</sup>

<sup>1</sup>"Home Nursing Aides," American Journal of Nursing, XXXX (March 1940), p. 257.

<sup>2</sup>"The Personality Development of Student Nurses," American Journal of Nursing, XXXIV (February, 1934), pp. 175-184.

<sup>3</sup>K.C. Garrison, "The Use of Psychological Tests in the Selection of Student-Nurses," Journal of Applied Psychology, XXIII (August, 1939), p. 465.





An analysis of the personality traits discussed above, indicates that the successful attendant would be: truthful, sympathetic, of a happy disposition (optimistic, pleasant), self-controlled (by implication), loyal (maintain dignity, avoid gossip), and have a sense of humor. These form the basis of those personality traits which the writer has attempted to measure through the use of standardized tests.

In addition, it is self-evident that the attendant must have the ability to learn to a sufficient degree to understand and retain the factual information given her in the class room, on the ward, or otherwise. The School requires that its students be grammar school graduates, prefers those that have had two years of high school, and prefers not to accept those who have had any higher formal education, as they have found them on the whole unable to adjust to the requirements of the work.

It would also seem self-evident that a certain degree of manual dexterity would be necessary. That this is true is obvious from the most casual inspection of the duties which an attendant must be able to perform, both in actual nursing and in housekeeping, as outlined in the textbook used by the School.<sup>1</sup> Since the attendant does no surgical nursing, however, the chances of her having to work with fine, precision instruments is negligible. It is the gross arm and hand movements which should, in the attendant nurse, be well-coordinated.

To recapitulate: the successful attendant should be sympathetic, of a happy disposition, truthful, self-controlled, loyal, and have a sense of humor; she should have sufficient mental ability to grasp the instruction given her in training and to carry out the orders given her by

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<sup>1</sup> Katharine Shepard, and Charles H. Lawrence, Textbook of Attendant Nursing, pp. 161-405.





the doctor on duty; she should be sufficiently dextrous to perform her duties with ease and speed.

To measure the degree to which the graduate attendants, subjects in this study, have these characteristics, the following battery of tests was chosen:

OTIS SELF-ADMINISTERING TEST OF MENTAL ABILITY

MINNESOTA VOCATIONAL TEST FOR CLERICAL WORKERS

THE SOCIALLY COMPETENT PERSON (Mort, Spence, et al.)

WASHBURNE S-A INVENTORY

BYRD HEALTH ATTITUDE SCALE

THE PERSONALITY INVENTORY (Bernreuter)

MINNESOTA RATE OF MANIPULATION

#### Selection of Tests to Form the Battery

The tests chosen to form the battery to be administered to the graduates and incoming students to the Household Nursing Association Training School for Attendant Nursing were selected after a careful consideration of available tests and after consultation with experts in the field of testing. Several tests, such as the Humm-Wadsworth Temperament Scale, the California Test of Mental Maturity, and the Kent-Rosanoff Word Association Test were considered but not included for the very obvious reason that their administration and interpretation would have required time out of all proportion to that available for those cooperating in this study. The Henmon-Nelson Test of Mental Ability--Form A was given to the first group tested, but later discarded as it did not appear to be giving any information not obtained from the Otis S-A Test of Mental Ability which was already in the battery.





The tests were also selected after consideration of other tests recently or currently in use in investigations of nursing aptitudes. In the study now being conducted at Massillon State Hospital<sup>1</sup> the battery, for example, is composed of the Detroit Mechanical, Bernreuter Personality Inventory, Link's Inventory of Activities and Interests, California Mental Maturity, Iowa Placement (Chemistry), Henderson Arithmetical Ability, Clapp-Young English, Henderson Nurse Aptitude, and two "reading comprehension" tests. The Army Alpha, Iowa Reading, and Bernreuter were used in the experiment at Rochester.<sup>2</sup> Roper in 1940 in studying certain aspects of the validity of Super's Test of Interest in Nursing administered to her subjects the Otis S-A, Strong's Vocational Interest Blank for Women, as well as Super's Test.<sup>3</sup>

So far as can be determined, the only study now being carried on which is comparable to this, is that previously referred to, being conducted by the Nurse Testing Division of the Psychological Corporation in cooperation with the Ballard School of Practical Nursing in New York. At the time of the initiation of this study, no information could be obtained as to the actual tests given. It was therefore necessary to choose the battery for this investigation after consultation with experts rather than because of the known value of certain tests under similar conditions.

As shown in this chapter, personality and interest play a predominantly important part in the success of the attendant nurse. No test of interest in nursing was included in this battery, however, since there was

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<sup>1</sup> Personal letter from H. Louise Aul, dated January 6, 1941.

<sup>2</sup> Personal letter from Isabel H. Dill, dated April 9, 1941.

<sup>3</sup> Sylvia Ann Roper, "A Test of Interest in Nursing," pp. 49. Unpublished Master's thesis of Clark University, 1940.





none available that met the requirements of the occupation, namely, interest in practical nursing and housework. The inclusion of the latter makes the use of Super's Test of Interest in Nursing or the Strong Interest Blank, or any other of the interest inventories invalid. As Miss Potts pointed out, "...it is hoped before too long there will be some instrument for measuring interest which will be useful and readily available. Until then it is probably not very safe to place any great reliance upon any of the interest scores in selection among applicants for admission..."<sup>1</sup>

The battery was deliberately over-weighted in the direction of personality measures, however, in the hope of finding one which would differentiate the successful nurse. Again, quoting Miss Potts, "Perhaps something of the same sort (see quotation above) needs to be said about personality measures. It is probably true that where carefully chosen, properly administered, and cautiously interpreted, such measures can be of considerable value in the guidance of students who are admitted."<sup>2</sup>

The choice of personality tests to include in the battery was particularly difficult in view of the lack of agreement as to their worth even by experts. Such disagreement is well illustrated by the completely contrary evaluations made on Mort's Test of the Socially Competent Person by two experienced investigators like Hilda Taba and Douglas Scates who disagree fundamentally on the value of this test.<sup>3</sup> It was definitely encouraging to have Miss H. Phoebe Gordon, Assistant in the Nurse Training

<sup>1</sup>E. M. Potts, "Selection of Student Nurses," American Journal of Nursing, XXXI (May, 1941), p. 591.

<sup>2</sup>Ibid., p. 591.

<sup>3</sup>O. K. Buros, Education, Psychological and Personality Tests of 1936, pp. 150-152.





Division of the Psychological Corporation, write that while she wished she could be of more help in offering suggestions as to a selection of tests, she imagined that the writer's "guess as to what might be helpful would (be) almost as good as mine."<sup>1</sup>

#### Description of Tests Used in Battery

Otis Self-Administering Test of Mental Ability: Higher Examination: Form C.--This test was used to measure "ability to learn." It is self-administering, easily scored, has a 20- or 30-minute time limit. Since the latter gives a more accurate measure it was used for this study.

The test consists of seventy-five problems,--informational, arithmetical, number series completion, recognition of opposites, analogies, understanding of proverbs, logical inferences, and practical judgment items. These are arranged in apparently chance sequence. Parenthesis following each question give ample space for the answer which is always in the form of a number or letter. The score is the number of correct answers.

Norms are provided in terms of mental age, grade (school and college), percentile rank for the general population; the IQ is easily found by use of a chart. Reliability is reported to be  $+ .92$  for grades 7-12. Validity has been established between the Higher Examination (used in this study) and the Advanced Examination. The coefficient of correlation between these two was  $.889$  for 180 cases in Grades 7 to 12. The average of four coefficients of correlation between the Higher and Intermediate for Grades 7 to 10 was  $.842$ .

The Otis Test was chosen for this battery because as a measure of

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<sup>1</sup> Personal letter from H.P. Gordon, dated January 14, 1940.





mental ability it has been widely used with extremely satisfactory results. Bingham has warned that none of the problems is difficult for a very bright person and consequently this is a better measure of mental speed or alertness than of power, at least in the higher ranges.<sup>1</sup> In view of the suspected and later confirmed low range of intelligence, this did not detract from the reliability of the test for the purpose of this study.

Minnesota Vocational Test for Clerical Workers (Short Form: Arranged by Dorothy M. Andrew under the direction of Donald G. Paterson and Howard P. Longstaff).--This test is a measure of speed and accuracy in noticing whether two numbers and whether two names are the same or different. The total time required for the actual test is fifteen minutes. It can be easily scored in less than three minutes.

The test consists of two parts: the first is made up of two hundred pairs of numbers; the second of two hundred pairs of names. In certain instances the pair are identical (5794367 \_\_\_\_ 5794367); in others there is a difference (79542 \_\_\_\_ 79524). If the two numbers or the two names are exactly the same, the subject makes a check mark on the line between them; if they are different, he makes no mark.

In constructing this test the authors "were primarily concerned with the factor of speed although they recognized that accuracy was a factor which could not be entirely eliminated."<sup>2</sup> In view of this, the score is based on the R-W formula. "Analysis of the Minnesota Clerical Test," says the author, "indicates that (it) is measuring a specific ability which is relatively independent of spatial, dexterity, and academic abilities...is

<sup>1</sup>Walter Van Dyke Bingham, Aptitudes and Aptitude Testing, pp. 336-337.

<sup>2</sup>Dorothy M. Andrew, and Donald G. Paterson, "Manual of Directions."





measuring an aptitude which is related positively to the abilities to discriminate small differences rapidly, to observe and compare, to adjust to a new situation, and to give attention to a problem."<sup>1</sup>

Norms are given for employed clerical workers and for adults gainfully occupied. Since sex differences were observed in the performance of the tests, separate norms are given for men and women. Reliability coefficients by the odd-even or comparable form method is about .90; by the test-retest .85. Validity has been established by several methods. Based on personal history ratings compared with test scores for groups of employed clerical workers, the validity coefficients are about .65; while with supervisors' ratings they are approximately .37. Further validation lies in the correlation of .71 between this test and the Scott Company Test for File Clerks and of .61 with the Thurstone Clerical Test.

This test was included in the battery to see to what extent the attendant nurse could see and could accurately report minute differences. Such work is part of her daily task when on duty. "A daily record of each patient is kept by means of charts or bedside notes," say Shepard and Lawrence in their textbook,<sup>2</sup> and "...should be accurate..." The text continues, points out that "Besides recording the temperature, pulse, respiration, and treatments, the attendant nurse must keep a careful record of all medication given, nourishment taken, the excretions, and the amount of sleep."<sup>3</sup>

Minnesota Rate of Manipulation Test.--This test was chosen to measure native speed capacity which, according to W.A. Ziegler, the author, is

<sup>1</sup> Dorothy M. Andrew, and Donald G. Paterson, "Manual of Directions."

<sup>2</sup> Katherine Shepard, and Charles H. Lawrence, Textbook of Attendant Nursing, p. 290.

<sup>3</sup> Ibid., p. 290.





"a unique trait the magnitude of which is easily and reliably determined" by this test.<sup>1</sup> Paterson has reported that "Darley has shown that the test as a whole, and Placing and Turning separately, are reliable for both men and women."<sup>2</sup> Of the validity of the test Paterson says that its "main claim for validity is that rather large differences in average scores have been found among different occupational groups."<sup>3</sup>

The test is divided into two sections, the placing and the turning. The same equipment is used for each, namely, an oblong board in which there are four rows of fifteen holes. There are sixty identical cylindrical blocks which fit these holes. In the placing test, the sixty blocks lie beyond the board in an arrangement similar to that which they would take were they inside the holes. The subject is asked to place the blocks back into the holes, one at a time, using one hand, and in a simple, logical order described by the examiner. The time taken to perform this task gives the score.

In the turning test, the blocks lie in the board. The subject, beginning at one corner, lifts out a block with one hand, turns it over, replaces it in the same hole with the other hand. Working horizontally of the board, she completes the row. The second row is started just below the last block of the first row, so that the subject is working in the opposite direction from which she started. This means a shift of hands, so that she picks up the block with the hand she had previously used to put it down. Again, the time taken to perform the task gives the score.

In accordance with the suggestion of the author, one trial practice was given for each test. Four more trials were given for each, the final

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<sup>1</sup>W.A. Ziegler, "Minnesota Rate of Manipulation Test," p. 1.

<sup>2</sup>D.G. Paterson et al, Student Guidance Techniques, p. 241.

<sup>3</sup>Ibid., p. 241.





score being the average of each four.

A study of the literature on techniques of nursing shows that ease and skill in handling both animate and inanimate objects is considered a sine qua non for a successful nurse. The practical nurse who also does housekeeping is no exception. Since the latter does no surgical nursing, however, skill in the use of the small muscles of the hand is less important than in the gross muscles of arm, wrist, and hand. Because the Minnesota Rate of Manipulation Test provides a measure for hand and finger speed, this seemed an especially good one to include in the battery. It has been widely used and its value is conceded to be a measure of what it purports to measure.

Standard norms are based on random samplings of the total population as selected by the Employment Stabilization Research Institute conducted by the University of Minnesota.

The Personality Inventory (Robert G. Bernreuter).--According to the author, this test measures several different aspects of personality at one time, namely, neurotic tendency, self-sufficiency, introversion-extroversion, dominance-submission, confidence in oneself, and sociability. It is self-administering and there is no time limit.

The test itself is composed of one hundred and twenty-five questions, to each of which the subject answers "yes," "no," or "I don't know," but circling the appropriate symbol which precedes the question. Two examples are:

18. Yes No ? Are you touchy on various subjects?

66. Yes No ? Do you find it difficult to get rid of a salesman?





Six separate scoring keys are used for scoring, one for each trait tested. The scoring is time consuming and arduous and because of this, the test must often be omitted from batteries in which it rightly belongs. For the purpose of this study the test was scored according to direction but on only the two F-scales, that is, confidence in oneself and sociability. For statistical purposes this was all that was essential, since the other four scales can be easily estimated by means of regression equations.<sup>1</sup>

Percentile norms are available for high school student, college students, and adults, with separate norms for either sex.

According to the author, coefficients of reliability computed by the split-half method and applying the Spearman-Brown prophecy formula range from .78 to .91.<sup>2</sup> Validity of the test has, according to the same source, been established by the correlation of the four scales with four traits measured by tests (Thurstone Neurotic Inventory, Bernreuter Self-sufficiency Test, Laird C2 Introversion Test, and Allport Ascendancy-Submission Reaction Study) already validated.

Before choosing any instruments for the measurement of personality traits, it was recognized that, as Paterson says, they are ".....necessary for success in school or occupation, yet they are most illusive traits to measure.....The inventories which we have, however, if properly interpreted by those who recognize their distinct limitations, are far better than judgments gained from the interview alone."<sup>3</sup>

<sup>1</sup>George K. Bennett, "A Simplified Scoring Method For The Bernreuter Personality Inventory," Journal of Applied Psychology, XXII (August, 1938), pp. 390-394.

<sup>2</sup>Robert G. Bernreuter, "Manual for the Personality Inventory."

<sup>3</sup>Donald G. Paterson et al, Student Guidance Techniques, p. 40.

Six right-angle sectors were used for each trial.

Each sector is 15° wide, and contains a number of dots.

The dots must be selected from the dots in which it is placed.

For the purpose of this study the sectors were arranged in a circle.

Only the two 15° sectors, that is, the sectors in which the dots are placed.

The sectors are numbered 1 to 12, and are arranged in a circle.

Four sectors are used in each of the four trials.

The sectors are numbered 1 to 12, and are arranged in a circle.

Each sector is 15° wide, and contains a number of dots.

The dots must be selected from the dots in which it is placed.

For the purpose of this study the sectors were arranged in a circle.

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The inclusion of this test in the battery was almost automatic on the part of the examiner. So widely has the test been used, both in general and in schools of nursing, that it seemed a foregone conclusion that it would be included in this battery. It seemed equally obvious that neither of these facts provided a basis for keeping the test in the battery for predictive purposes unless statistical examination proved that it should be there. Many writers, too, have questioned the validity of this test. Paterson and others who used this test in the Occupational Analysis Clinic in the Employment Stabilization Research Institute at the University of Minnesota says that "the general application of such personality tests in the field of occupational guidance is not warranted at the present time."<sup>1</sup> He adds, however, that "this conclusion should not be cited as a reason for discontinuing research on personality tests; on the contrary, it should lead to increased research effort."<sup>2</sup> If, therefore, this test should be found to bear some positive relationship to success in nursing, its value would be demonstrated for that unique purpose only.

The Socially Competent Person, Tests of (Form A: Paul R. Mort et al).-- This test was designed as an "instrument for measuring the pupils' reactions to situations in four areas of living. I, Health; II, Personal Economics; III, Family-Community Relations; and IV, Social-Civic Relations."<sup>3</sup>

Reliability of the total test for a single grade, reports the author, ranges from .83 to .94 based upon about three hundred cases per grade.<sup>4</sup>

<sup>1</sup>D.G. Paterson, and J.G. Darley, and R.M. Elliott, Men, Women and Jobs, p. 115.

<sup>2</sup>Ibid., p. 115.

<sup>3</sup>Paul R. Mort, et al, "Manual of Directions."

<sup>4</sup>Ibid.





Validation was made by submitting the material for criticism to two experts in each related field and by retaining only the approved material.

The test consists of four divisions, containing three hundred and seventy items in all. Of these one hundred are in the area of health, seventy-five in that of personal economics, seventy in the field of family and community relationships, and one hundred and twenty-five in social-civic competence. Each question consists of a statement in relation to a situation which might exist in that particular area. Accompanying each statement is a description, sometimes several, of possible results which might occur or action which might be taken. Two examples are:

V.

Jack awakened one morning with a very sore throat, a very bad headache, and an upset stomach. Sensible things for Jack to do are:

- |     |   |   |   |
|-----|---|---|---|
| 23. | To take castor oil.   | A | D |
| 24. | To plan to spend the day in bed.                                  | A | D |
| 25. | To have his mother call a doctor to find out what the trouble is. | A | D |

etc.

VII.

By buying wisely it is possible to get excellent quality without too great a cost. Clothing costs tend to be lower for some people than for others, depending upon various factors. They are likely to be lower for a person who:

- |     |   |   |   |
|-----|---|---|---|
| 51. | Purchases at the beginning of the season.             | A | D |
| 52. | Purchases machine-made, rather than handmade clothes. | A | D |
| 53. | Purchases clothes made in the latest style.           | A | D |

etc.





The subject is asked to consider each situation and decide whether she agrees (A) or disagrees (D) with each of the statements.

The scoring is very simple, being the total of statements answered correctly. While norms are provided for school grades, and correspondingly for age, they were not used in this study. In the first place, there seemed to be no reason why it would be helpful to know how the graduate attendants compare to grade or high school pupils in school. In the second place, the test, when given according to directions, has very definite time limits for each section. When administered to the nurses, these time limits were disregarded as it seemed more important to measure the individual's reaction to each situation rather than her reading time. The raw score for each attendant was obtained and considered in relationship to the group as a whole.

Despite diversity of opinion in regard to the value of this test<sup>1</sup> it seems to present certain situations which are like or similar to those which the attendant nurse must meet. Because the attendant must be prepared not only to do bedside nursing but also to manage a household, when necessary, the scope of her activities includes not only the family and the relationships involved there, but often the handling of financial matters, the purchase of medicines, food, and other supplies, the paying of tradesmen, and so forth. The section on Social-Civic Relations might have been omitted for the purpose of this study, but it contains statements which an alert, thoughtful adult might well have considered, - and so might be an added measure of emotionally mature people.

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<sup>1</sup>

O.K. Buros, op. cit., pp. 150-152.

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Washburne S-A Inventory (Thaspic Edition: John N. Washburne).--

The primary purpose of this test, according to the author, is "to determine the degree of social and emotional adjustment of an individual. The score is designed to give a separate measure of development in each of six traits, (happiness: alienation: sympathy: purpose: impulse-judgment: control) which are very slightly correlated with intelligence and are highly correlated with social and emotional adjustment. The score is also designed to give a measure of adjustment in all the traits combined."<sup>1</sup>

In addition to the six sub-tests of traits referred to, a seventh sub-test is included as a test of truthfulness or test accuracy. This does not indicate degree of adjustment but does indicate how valid and reliable the total score is.

The Inventory is an eight-page booklet containing one hundred and twenty-two questions. It is self-administering and has no time limit. There are seven objective-type sub-tests and one essay type. The latter is, according to the author, "chiefly for purposes of interviewing and differentiating between degrees of superior adjustment."<sup>2</sup> It does not need to be scored in order to compare individual test results with the norms and has not been scored in this study.

The Inventory has been standardized on Junior High School, High School, and College students.

Washburne has demonstrated the high validity of the instrument as a measure of social adjustment (the bi-serial  $r$  coefficient being .90). He determined by retest of four hundred college students that the coefficient of reliability was .92.<sup>3</sup>

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<sup>1</sup> John N. Washburne, "Washburne Social-Adjustment Inventory Manual for Interpreting," p. 3.

<sup>2</sup> Ibid., p. 4.

<sup>3</sup> Ibid., p. 12.





A very useful Profile Chart showing these norms is printed on the face of the Inventory, so that the degree to which the individual is well- or mal-adjusted and the areas in which he is strong or weak can be seen at a glance.

As was pointed out earlier in this study, the need for adequate measures of personality traits is urgent. In considering the use of the Washburne Inventory importance was placed on the fact that it is being used extensively by the National Youth Administration Testing Units and has been found valuable for diagnostic and predictive purposes.

Byrd Health Attitude Scale (Oliver E. Byrd).--This scale, according to the author, is designed "to measure health attitudes of the group or of the individual...should have a maximum capacity to distinguish students with sound health attitudes from those with unsound health attitudes."<sup>1</sup>

The scale is composed of one hundred statements. The subject is given an opportunity to designate by underlining the appropriate word whether he strongly agrees, agrees, is undecided, disagrees, or strongly disagrees with each statement. Two examples are:

44. Extreme shortness of breath should lead a person  
to have a medical examination

Strongly agree    Agree    Undecided    Disagree    Strongly disagree

66. Doctors should wash the eyes of a newly born baby  
with a solution to destroy germs.

Strongly agree    Agree    Undecided    Disagree    Strongly disagree

Numerical values ranging from 1 to 5 have been given to each response. The score is the sum of the numbers attached to the responses underlined

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<sup>1</sup> Oliver E. Byrd, "Byrd Health Attitude Scale Instruction Information."





by the subject. The values have been reversed on several statements to prevent the subjects using these as a cue to the correct answer.

There are no norms for the scale. Its inclusion in this battery was for the purpose of determining whether the "successful" attendant differed from the less successful or unsatisfactory attendant in her health attitudes.

The following chapters.--Chapter IV, which follows, presents an analysis of the test and inventory results, a report of the statistical procedure used in the study of these results, the authority for this procedure, and, finally, an interpretation of the results of the correlations made as a result of the application of the statistical procedure.

The final chapter, Chapter V, gives a brief summary of the results obtained from the study; presents the conclusions drawn from the results; and, finally, offers recommendations for the use of tests for selection of students for the Household Nursing Association Training School for Attendant Nursing.





## CHAPTER IV

### ANALYSIS OF DATA

This chapter is a report of the data obtained from the administration of the battery of tests described in the preceding chapter. The data on each test will be presented separately with an interpretation from a consideration of the group as a whole. This will be followed by a report on the relationship of one test to each other test, on the selection of criteria for success, and finally on the relationship between the criteria and the tests in the battery.

#### Guidance Implications

It is evident from even a cursory inspection of the test results that there is much material there which could be effectively used for both group and individual guidance. It is, however, not within the scope of this study to discuss these implications and possibilities at any length. It does seem pertinent, however, to point out that the material is there. Interpreted by a trained psychologist, it could be used to help the individual attendant make a more satisfactory adjustment both in her work and private life. As was pointed out in Chapter III, the Household Nursing Association Training School agreed to see the graduate attendants' test results only in general summaries. This was done to allay any fears the individual attendants might have that the tests would in some way affect their standing with the School and Registry. This promise was not made to the incoming students, however, and it is greatly to be hoped that it will be possible to use the results of their tests for constructive





personnel guidance purposes. Phoebe Gordon, Assistant to Miss Edith Potts, Director of the Nurse Testing Division of the Psychological Corporation, has written helpfully to this point.<sup>1</sup>

#### Data obtained from each test

The Otis S-A Test of Mental Ability.--This test was used to measure ability to learn. The raw scores of the fifty-five attendants to whom this was administered are reported in TABLE I. The distribution of these scores with the median and quartiles indicated both for the group itself and for the general population for whom norms are given by the author are shown in Figure 1. TABLE II and similarly Figure 2 give the same information translated into I.Q. equivalents.

The attendant group as a whole falls considerably below the general population. The median of the scores for the general population is, for example, 42; for the attendant group it is 34.8, which is within .8 points of  $Q_1$  of the general population.

Considering this group in relation to school groups, we find that those attendants whose scores fall within the first quartile have an equivalent grade status of less than the eighth grade; while the median is equivalent to Grade 9.3; and those above the third quartile are equivalent to Grade 11 and above.

The Minnesota Vocational Test for Clerical Workers.--This test was given to measure speed and accuracy in noticing small differences in paired names and numbers. The raw scores for both the name and number checking sections are presented in TABLE III and shown graphically in Figures 3 and 4.

<sup>1</sup>H. Phoebe Gordon, "Psychological Tests in Guidance," Trained Nurse and Hospital Review, CVI (February, 1941), pp. 120-123.





TABLE I

FREQUENCY DISTRIBUTION OF RAW SCORES ON THE OTIS TEST  
FOR 55 ATTENDANT NURSES

Raw Scores	Frequency for this group	Percentage of this group
55-59	1	1.8
50-54	1	1.8
45-49	3	5.4
40-44	10	18.1
35-39	12	21.8
30-34	15	27.2
25-29	8	14.5
20-24	4	7.2
15-19	1	1.8
Total	55	99.6

Mean - 34.8

S.D. - 7.5

TABLE II

FREQUENCY DISTRIBUTION OF I Q SCORES ON THE OTIS TEST  
FOR 55 ATTENDANT NURSES

I. Q. Scores	Frequency for this group	Percentage of this group
115-119	1	1.8
110-114	0	-
105-109	3	5.4
100-104	4	7.2
95- 99	13	23.6
90- 94	13	23.6
85- 89	14	25.4
80- 84	5	9.0
75- 79	1	1.8
70- 74	1	1.8
Total	55	99.6

Mean - 92.4

S.D. - 7.5





$Q_1$  29.7

Median 34.8

$Q_3$  40.0

----- General Population

$Q_1$  34.0

Median 42.0

$Q_3$  50.0

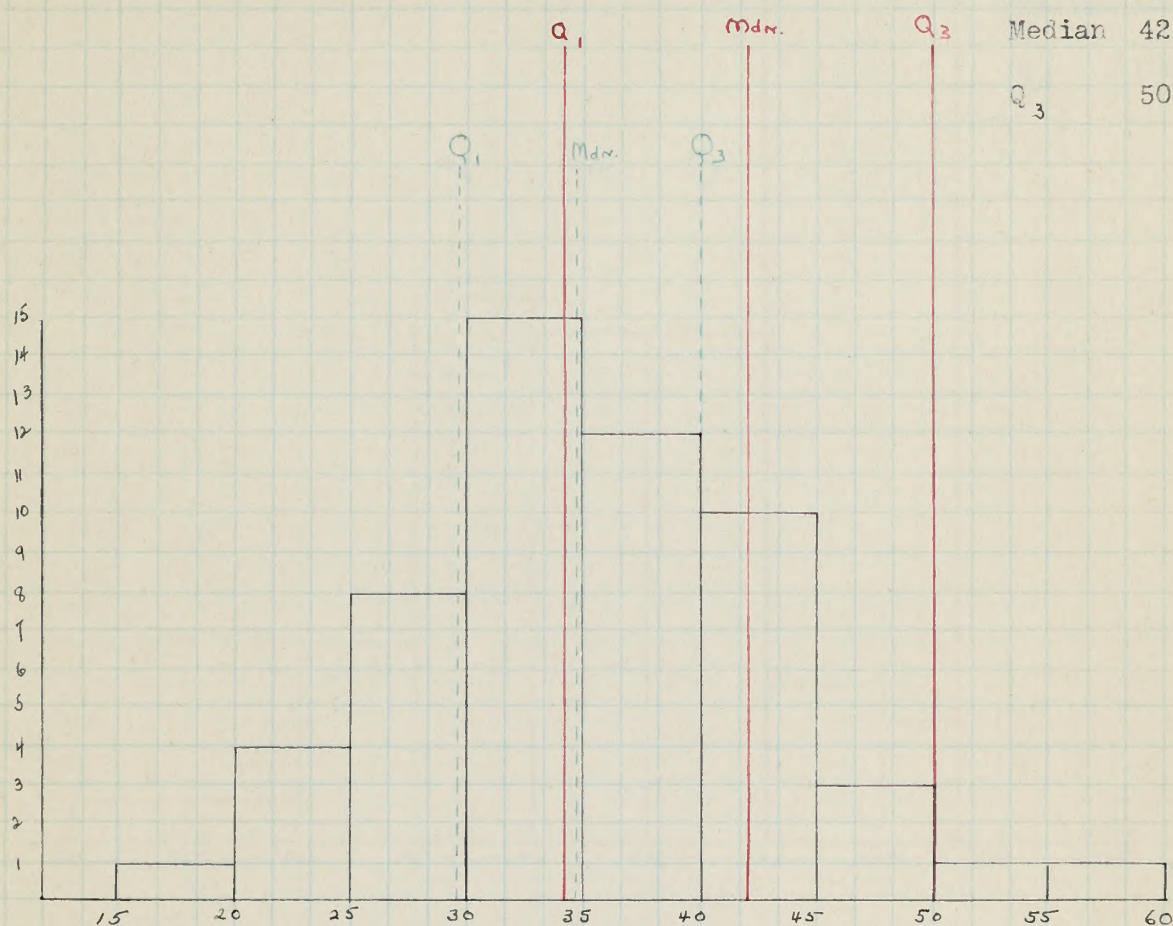
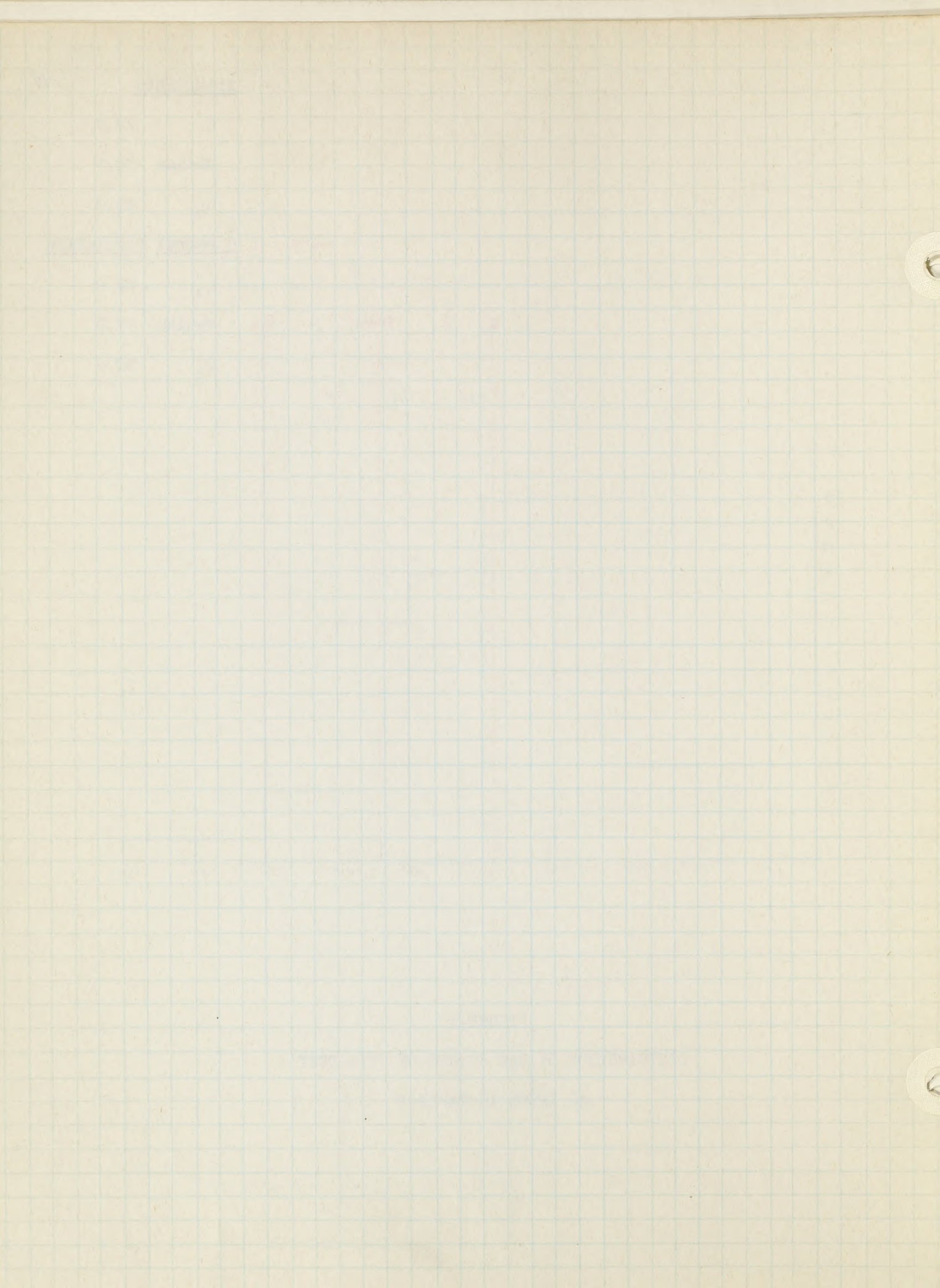


FIGURE 1

DISTRIBUTION OF RAW SCORES ON OTIS TEST

AS SHOWN IN TABLE I







Q<sub>1</sub> 86.8  
Median 92.5  
Q<sub>3</sub> 97.2

----- General Population

Q<sub>1</sub> 92.0  
Median 100.0  
Q<sub>3</sub> 108.0

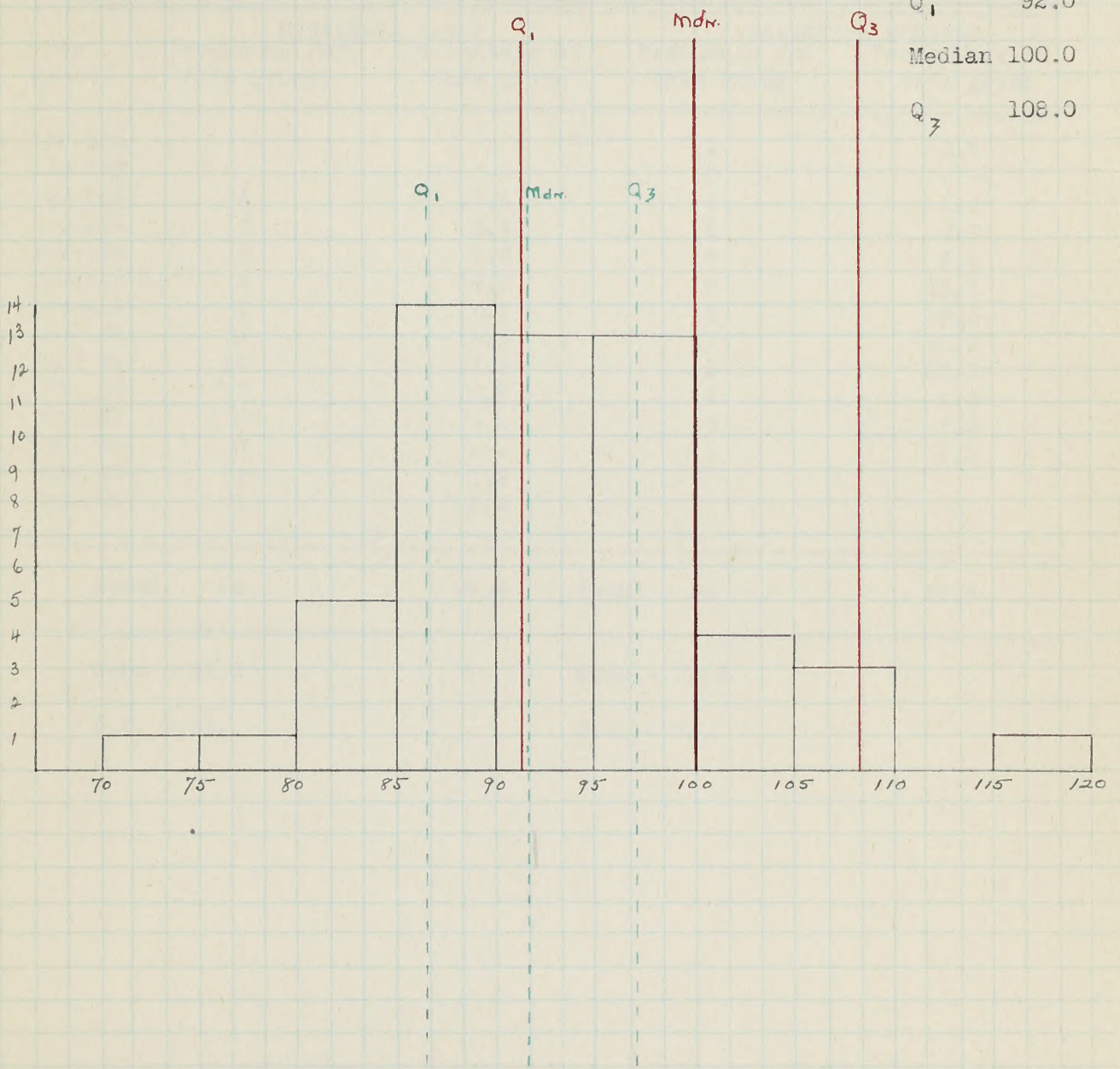


FIGURE 2  
DISTRIBUTION OF I Q SCORES ON OTIS TEST  
AS SHOWN IN TABLE II



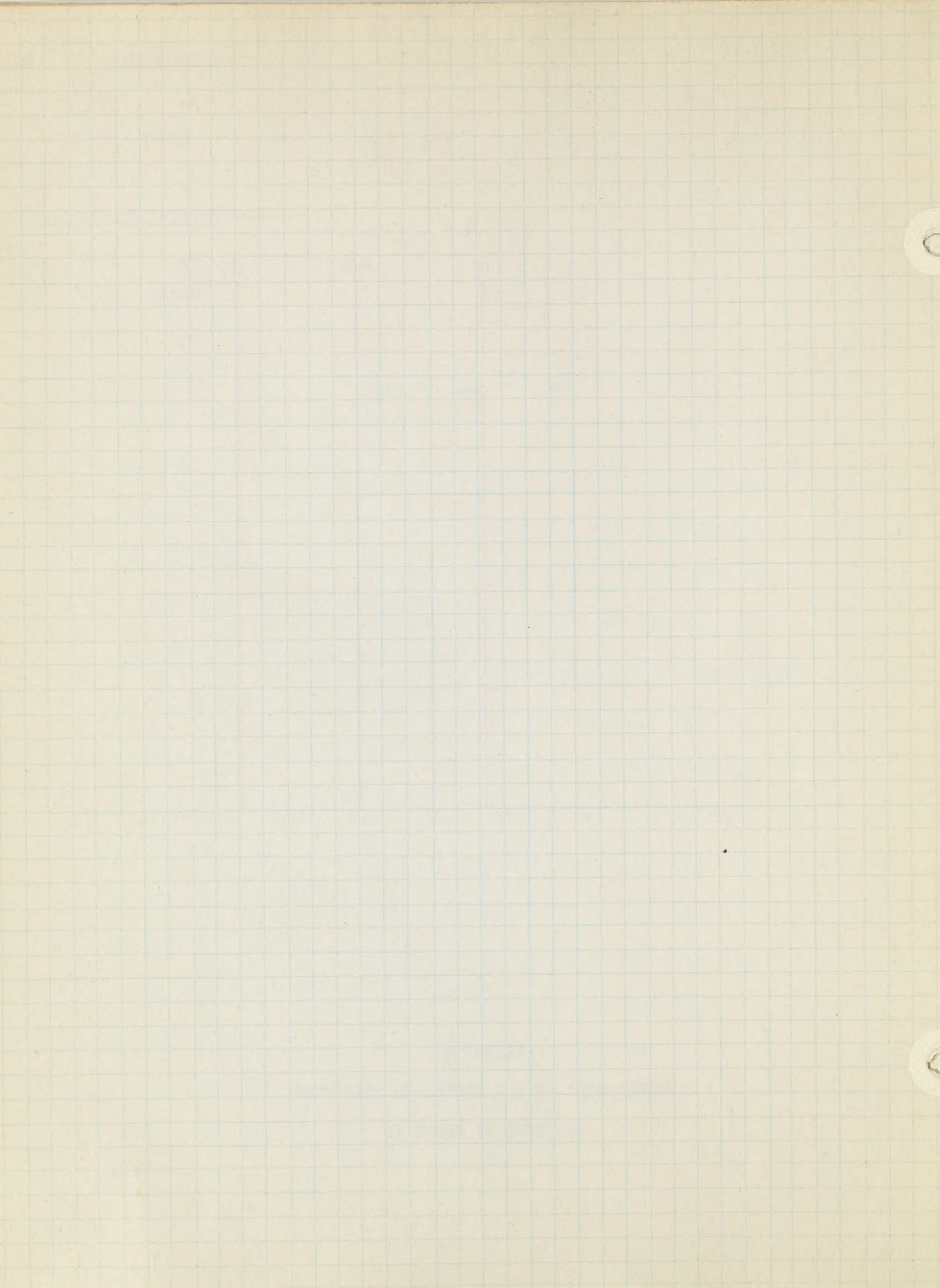




TABLE III  
 FREQUENCY DISTRIBUTION OF RAW SCORES  
 ON THE  
 MINNESOTA VOCATIONAL TEST FOR CLERICAL WORKERS  
 FOR 55 ATTENDANT NURSES

Raw Scores	MINNESOTA NAMES		MINNESOTA NUMBERS		
	Frequency for this group	Percentage of this group	Frequency for this group	Percentage of this group	
160-169			2	3.6	
150-159			0	- -	
140-149	2	3.6	1	1.8	
130-139	3	5.4	2	3.6	
120-129	2	3.6	3	5.5	
110-119	8	14.5	6	11.1	
100-109	9	16.3	11	20.3	
90- 99	9	16.3	11	20.3	
80- 89	13	23.6	9	16.7	
70- 79	7	12.7	4	7.4	
60- 69	0	- -	4	7.4	
50- 59	0	- -	1	1.8	
40- 49	1	1.8			
30- 39	1	1.8			
Total	55	99.6	Total	54	99.5
Mean - 97.2			Mean - 99.3		
S.D. - 21.			S.D. - 22.		





----- Attendants ----- Women Gainfully Occupied

$Q_1$	83.1	$Q_1$	86.5
Median	96.1	Median	111.0
$Q_3$	110.8	$Q_3$	137.0

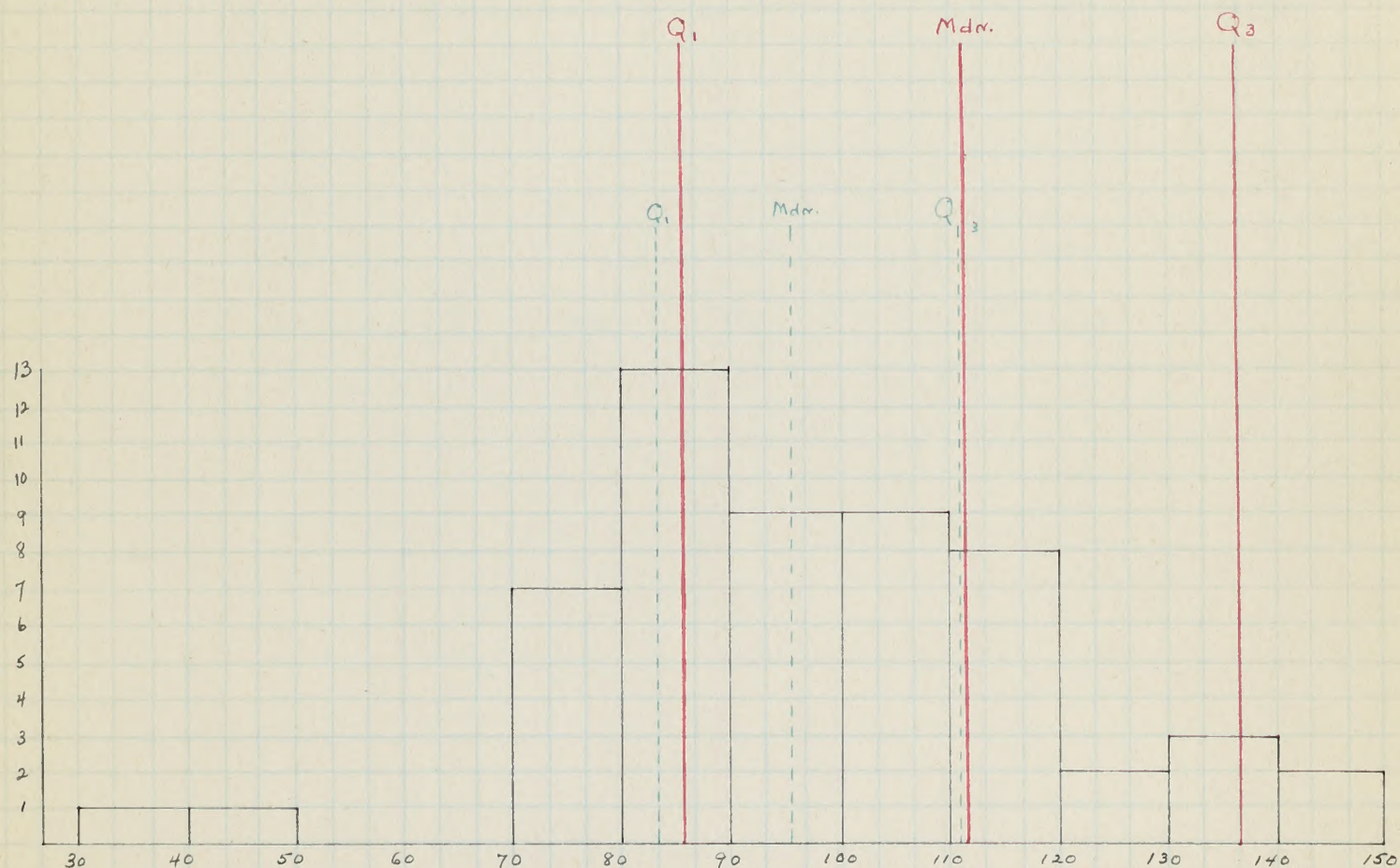


FIGURE 3

DISTRIBUTION OF RAW SCORES

ON MINNESOTA VOCATIONAL TEST - NAMES -

AS SHOWN IN TABLE III







----- Attendants

$Q_1$  84.3

Median 98.1

$Q_3$  110.3

----- Women gainfully occupied

$Q_1$  92.0

Median 109.0

$Q_3$  133.0

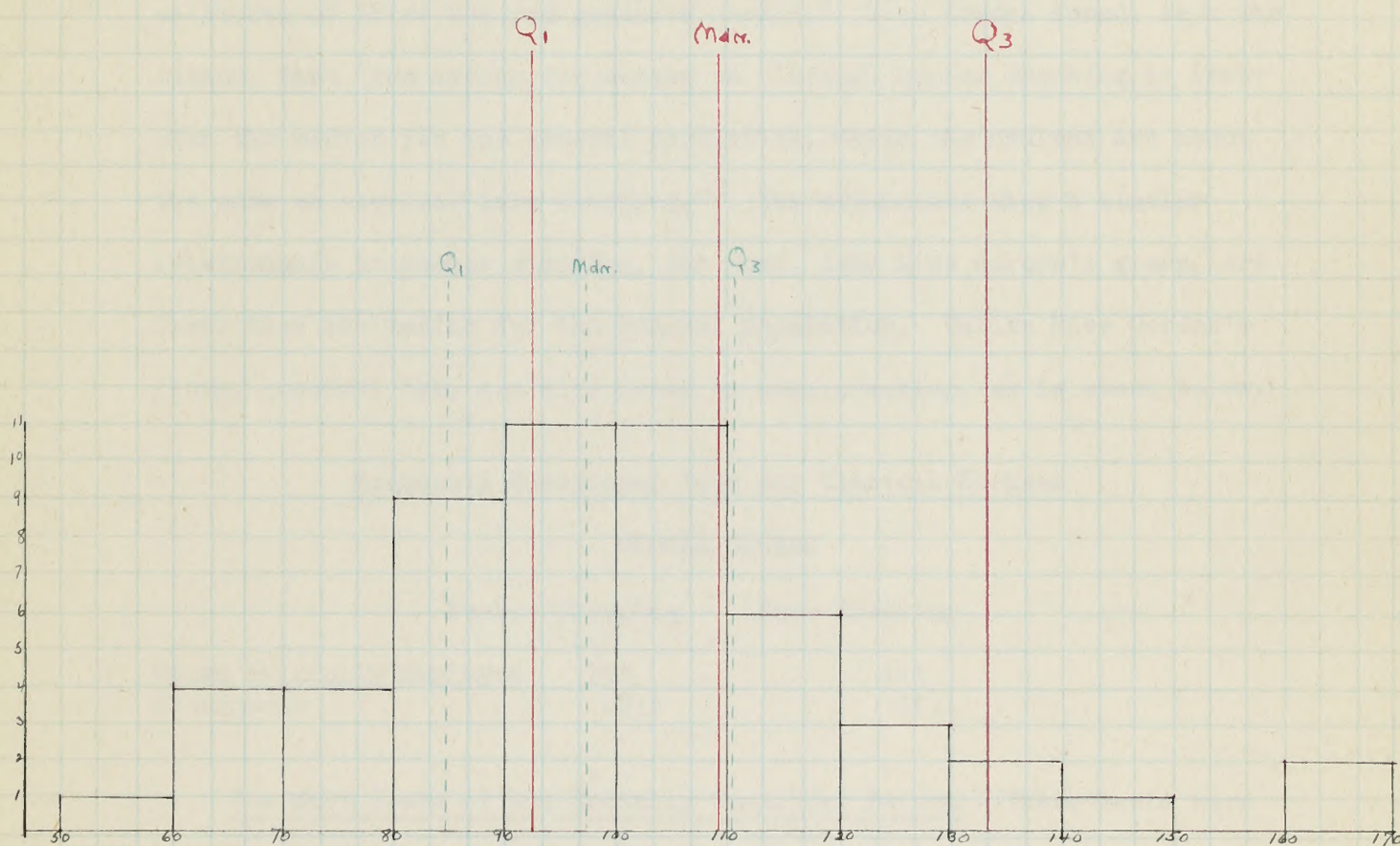


FIGURE 4

DISTRIBUTION OF RAW SCORES

ON MINNESOTA VOCATIONAL TEST - NUMBERS -

AS SHOWN IN TABLE III







On both sections of this test, the attendants' scores were below those for adult women gainfully occupied, for whom norms are supplied by the author. On both tests the median for the gainfully employed group (109 for numbers, 111 for names) was almost identically the same as the third quartile point (110.3 for numbers, 111 for names) for the attendants.

In the Manual the author reports a study made by Phoebe Gordon of aptitudes of three hundred graduate nurses.<sup>1</sup> Miss Gordon found, says the author, that "the median for nurses on clerical number checking is lower than the median for the general population, while the medians are about the same on clerical name checking."<sup>2</sup> The attendants show a similar relationship in number checking, for they, like Miss Gordon's group, are lower than the median for the general population. Unlike Miss Gordon's group, however, they are also lower in name checking, as is shown below.

#### Minnesota Vocational Test for Clerical Workers

##### MEDIAN SCORES

	Number Checking	Name Checking
Women Gainfully Employed	109	111
Attendants	98.1	96.1

The Most Tests of the Socially Competent Person.--These tests were given to measure the individual's reactions to four areas of living,--health, personal economics, family-community, and social-civic relations. Since, as has been explained earlier, the directions for administration were not followed exactly, any comparison between the results obtained

<sup>1</sup> Phoebe Gordon, "Occupational Aptitude and Interest Tests Applied to 300 Graduate Nurses," Unpublished Master's thesis for the University of Minnesota, 1933.

<sup>2</sup> Dorothy M. Andrew, and Donald G. Paterson, "Manual of Directions Minnesota Vocational Test for Clerical Workers."





TABLE IV  
FREQUENCY DISTRIBUTION OF RAW SCORES ON THE MORT TEST  
FOR 53 ATTENDANT NURSES

Raw Scores	Frequency for this group	Percentage of this group
330-339	1	1.8
320-329	4	7.5
310-319	8	15.0
300-309	12	22.6
290-299	8	15.0
280-289	7	13.2
270-279	4	7.5
260-269	4	7.5
250-259	2	3.7
240-249	-	- -
230-239	-	- -
220-229	1	1.8
210-219	1	1.8
200-209	1	1.8
Total	53	99.2

Mean - 291.6

S.D. - 26.

# TABLE 1

PERCENTAGE DISTRIBUTION OF THE POPULATION BY SEX AND AGE GROUP

Age Group	Percentage of Total Population	Percentage of Male Population
0-4	12.5	12.5
5-9	11.8	11.8
10-14	11.2	11.2
15-19	10.5	10.5
20-24	9.8	9.8
25-29	9.2	9.2
30-34	8.5	8.5
35-39	7.8	7.8
40-44	7.2	7.2
45-49	6.5	6.5
50-54	5.8	5.8
55-59	5.2	5.2
60-64	4.5	4.5
65-69	3.8	3.8
70-74	3.2	3.2
75-79	2.5	2.5
80-84	1.8	1.8
85-89	1.2	1.2
90-94	0.5	0.5
95-99	0.2	0.2
Total	100.0	100.0

Source: Census of India, 1951

Table 1 - Continued



Attendants $Q_1$  282.3

Median 298.1

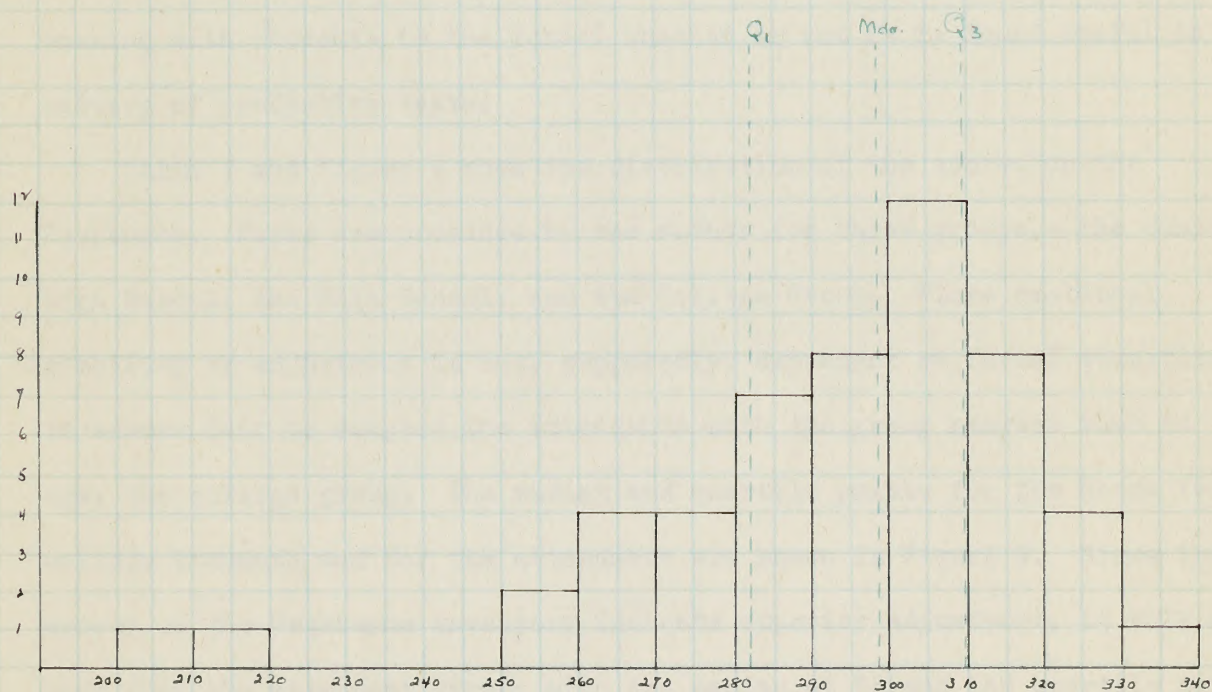
 $Q_3$  309.1

FIGURE 5

DISTRIBUTION OF RAW SCORES ON MORT TEST

AS SHOWN IN TABLE IV







from this study and those reported by the authors would be unjustified and invalid.

The scores on this test have been listed in TABLE IV and an accompanying histogram is presented in Figure 5. The scores, it will be observed, are slightly skewed negatively ( $Sk = -.30$ )

The Washburne S-A Inventory.--According to the author, this inventory determines the degree of social and emotional adjustment of an individual. Since this test was considered by the School staff as one of the most important, it has been recommended that it be used for guidance purposes in working with students in the School whether or not it is found useful in a battery of predictive tests.

TABLE V and Figure 6 show the distribution of the scores on the Washburne. Norms are provided by the author for three groups,--the Junior High School, the High School, and the College Group. Since emotional stability or adjustment is not, supposedly, dependent on formal education, it seemed fair to compare the attendants with the group nearest them in age, the college group. The median and quartile points for the norms for college students and for the attendants are shown in Figure 6. Since low scores on the Washburne inventory indicate superior adjustment, it will be seen that the attendant group, with the median at 95 and the quartile points at 80 and 111.6, is slightly better adjusted than the college group, with the median at 102 and the quartile points at 86 and 115. This conclusion must be qualified, however, by the fact that twelve of the attendants scored above 30 on the truthfulness sub-scale. The author of the test has stated that all tests with a truthfulness score over 30 should be discarded or considered separately, for the obvious reason that the test results may not be valid. This was not done in this study, however, since

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TABLE V

FREQUENCY DISTRIBUTION OF RAW SCORES ON THE WASHBURNE TEST  
FOR 54 ATTENDANT NURSES

Raw Scores	Frequency for this group	Percentage of this group
180-189	1	1.8
170-179	-	- -
160-169	1	1.8
150-159	1	1.8
140-149	-	- -
130-139	3	5.5
120-129	2	3.6
110-119	7	12.9
100-109	8	14.8
90- 99	8	14.8
80- 89	10	18.5
70- 79	7	12.9
60- 69	4	7.4
50- 59	1	1.8
40- 49	1	1.8
Total	54	99.4

Mean - 97.6

S.D. - 27.

THE FOLLOWING TABLES SHOW THE RESULTS OF THE

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----- Attendants

$Q_3$  80.0

Median 95.0

$Q_1$  111.6

----- College Students

$Q_3$  86.0

Median 102.0

$Q_1$  115.0

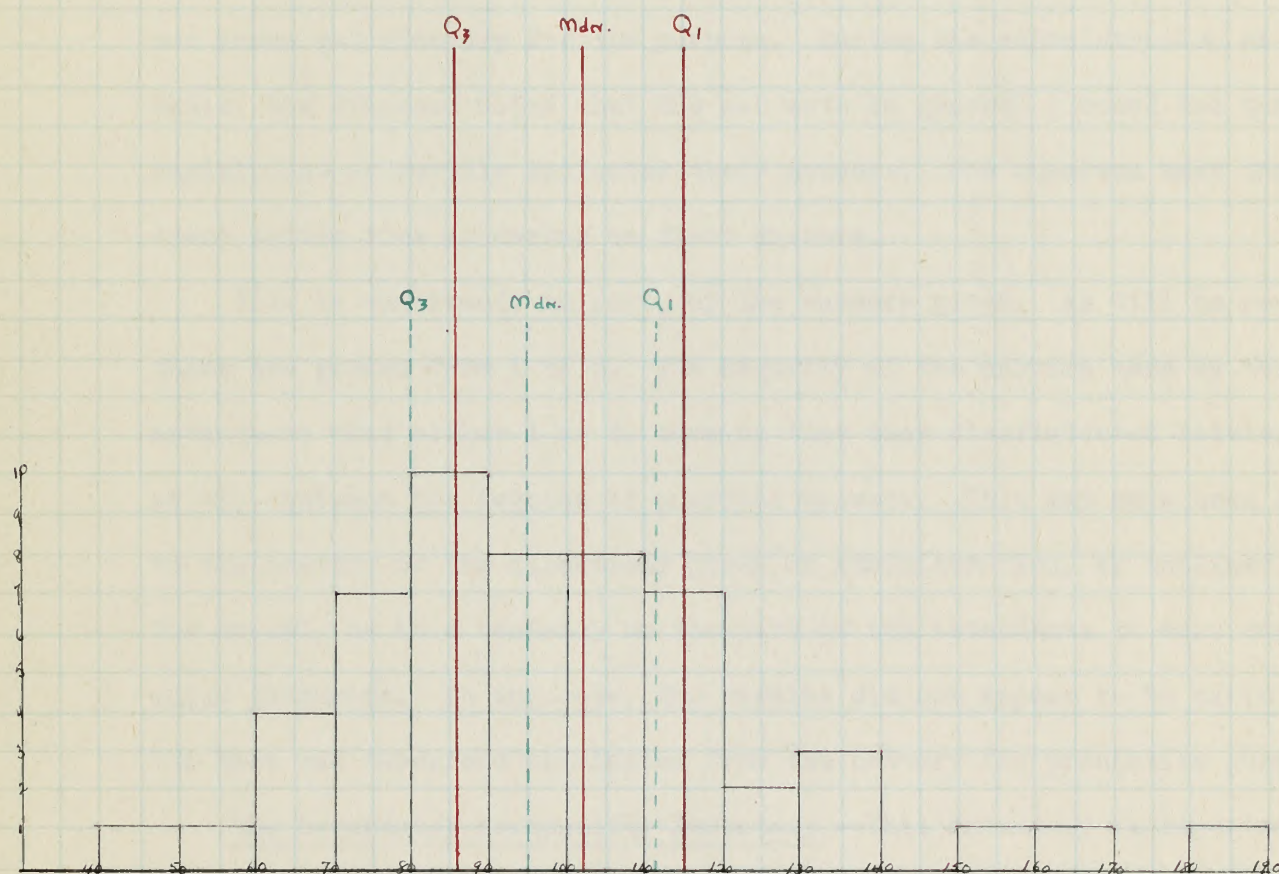


FIGURE 6

DISTRIBUTION OF RAW SCORES ON WASHBURNE INVENTORY

AS SHOWN IN TABLE V







doing so would have injected into the study an element of selection which would have been undesirable.

The Byrd Health Attitude Scale.--This scale, which is reported in TABLE VI and shown graphically in Figure 7, was given for the purpose of determining whether the successful attendant differed from the less successful attendant in her health attitudes. This seemed and still does seem a most appropriate field to investigate. This scale, however, did not prove satisfactory for the purpose. During the administration of the scale, the examiner noted that the subjects in general scanned the questions rapidly and as rapidly indicated their answers. She observed that they spent little time pondering on their answers.

This is confirmed, in part, by the answers given. As will be recalled, these are graded from 1 to 5. The majority of the answers made by the attendants were either 1 or 5, showing that they discriminated little, if at all, between the degrees of possible answers. This may have been due to the brevity of the directions given in administration, as outlined in the manual, or to a tendency on the part of the attendants to make snap or quick judgments. In any case, the results did not appear to be valid and the test was therefore eliminated from the battery for predictive purposes.

The Bernreuter Personality Inventory.--This inventory is reported in TABLE VII and illustrated in Figures 8 and 9. For facility in statistical calculations, the sum of 150 was added to each score to make them positive and thus easier to handle. The scores reported are, therefore, all 150 points greater than the actual score. For purposes of comparison the same amount has been added to the median and quartile points of the norms given by the author for adult women which are also shown on the histograms in Figures 8 and 9.

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TABLE VI  
FREQUENCY DISTRIBUTION OF RAW SCORES ON THE BYRD TEST  
FOR 55 ATTENDANT NURSES

Raw Scores	Frequency for this group	Percentage of this group
480-489	1	1.8
470-479	3	5.4
460-469	2	3.6
450-459	5	9.0
440-449	7	12.7
430-439	5	9.0
420-429	5	9.0
410-419	4	7.2
400-409	13	23.6
390-399	3	5.4
380-389	3	5.4
370-379	4	7.2
Total	55	99.3

Mean - 423.

S.D. - 28.

# TABLE VI

PERCENTAGE DISTRIBUTION OF THE TOTAL  
OF THE TOTAL

PERCENTAGE OF TOTAL	PERCENTAGE OF TOTAL	PERCENTAGE OF TOTAL
1.1	1	100-100
1.2	2	100-100
1.3	3	100-100
1.4	4	100-100
1.5	5	100-100
1.6	6	100-100
1.7	7	100-100
1.8	8	100-100
1.9	9	100-100
2.0	10	100-100
2.1	11	100-100
2.2	12	100-100
2.3	13	100-100
2.4	14	100-100
2.5	15	100-100
2.6	16	100-100
2.7	17	100-100
2.8	18	100-100
2.9	19	100-100
3.0	20	100-100
3.1	21	100-100
3.2	22	100-100
3.3	23	100-100
3.4	24	100-100
3.5	25	100-100
3.6	26	100-100
3.7	27	100-100
3.8	28	100-100
3.9	29	100-100
4.0	30	100-100
4.1	31	100-100
4.2	32	100-100
4.3	33	100-100
4.4	34	100-100
4.5	35	100-100
4.6	36	100-100
4.7	37	100-100
4.8	38	100-100
4.9	39	100-100
5.0	40	100-100
5.1	41	100-100
5.2	42	100-100
5.3	43	100-100
5.4	44	100-100
5.5	45	100-100
5.6	46	100-100
5.7	47	100-100
5.8	48	100-100
5.9	49	100-100
6.0	50	100-100
6.1	51	100-100
6.2	52	100-100
6.3	53	100-100
6.4	54	100-100
6.5	55	100-100
6.6	56	100-100
6.7	57	100-100
6.8	58	100-100
6.9	59	100-100
7.0	60	100-100
7.1	61	100-100
7.2	62	100-100
7.3	63	100-100
7.4	64	100-100
7.5	65	100-100
7.6	66	100-100
7.7	67	100-100
7.8	68	100-100
7.9	69	100-100
8.0	70	100-100
8.1	71	100-100
8.2	72	100-100
8.3	73	100-100
8.4	74	100-100
8.5	75	100-100
8.6	76	100-100
8.7	77	100-100
8.8	78	100-100
8.9	79	100-100
9.0	80	100-100
9.1	81	100-100
9.2	82	100-100
9.3	83	100-100
9.4	84	100-100
9.5	85	100-100
9.6	86	100-100
9.7	87	100-100
9.8	88	100-100
9.9	89	100-100
10.0	90	100-100
10.1	91	100-100
10.2	92	100-100
10.3	93	100-100
10.4	94	100-100
10.5	95	100-100
10.6	96	100-100
10.7	97	100-100
10.8	98	100-100
10.9	99	100-100
11.0	100	100-100

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----- Attendants $Q_1$  402.3

Median 421.0

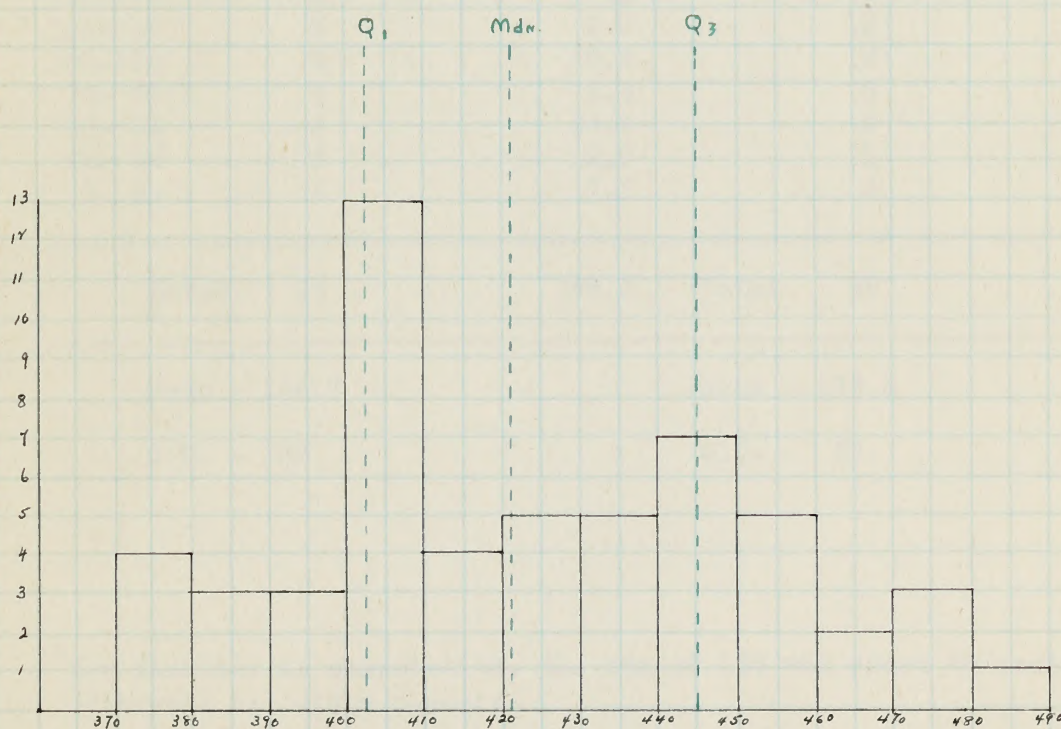
 $Q_3$  445.3

FIGURE 7

DISTRIBUTION OF RAW SCORES ON BYRD TEST

AS SHOWN IN TABLE VI.







TABLE VII

FREQUENCY DISTRIBUTION OF RAW SCORES ON THE BERNREUTER TEST  
(F1-C and F2-S)  
FOR 55 ATTENDANT NURSES

Raw Scores*	BERNREUTER F1-C		BERNREUTER F2-S	
	Frequency for this group	Percentage of this group	Frequency for this group	Percentage of this group
300-324	2	3.6		
275-299	3	5.4		
250-274	2	3.6		
225-249	4	7.2	1	1.8
200-224	4	7.2	3	5.4
175-199	8	14.5	5	9.0
150-174	4	7.2	6	10.9
125-149	5	9.0	12	21.8
100-124	3	5.4	12	21.8
75- 99	3	5.4	8	14.5
50- 74	8	14.5	4	7.2
25- 49	5	9.0	1	1.8
0- 24	4	7.2	3	5.4
Total	55	99.2	Total	55
				99.6
Mean - 144.7			Mean - 123.3	
S.D. - 85			S.D. - 50.	

\*For facility in computation, the sum of 150 was added to each score to eliminate all minus numbers.

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AttendantsQ<sub>1</sub> 64.1\*

Median 147.5\*

Q<sub>3</sub> 206.3\*Adult WomenQ<sub>1</sub> 83.0\*

Median 143.4\*

Q<sub>3</sub> 210.0\*

\*Raw scores have had the sum of 150 added to them for facility in computing.

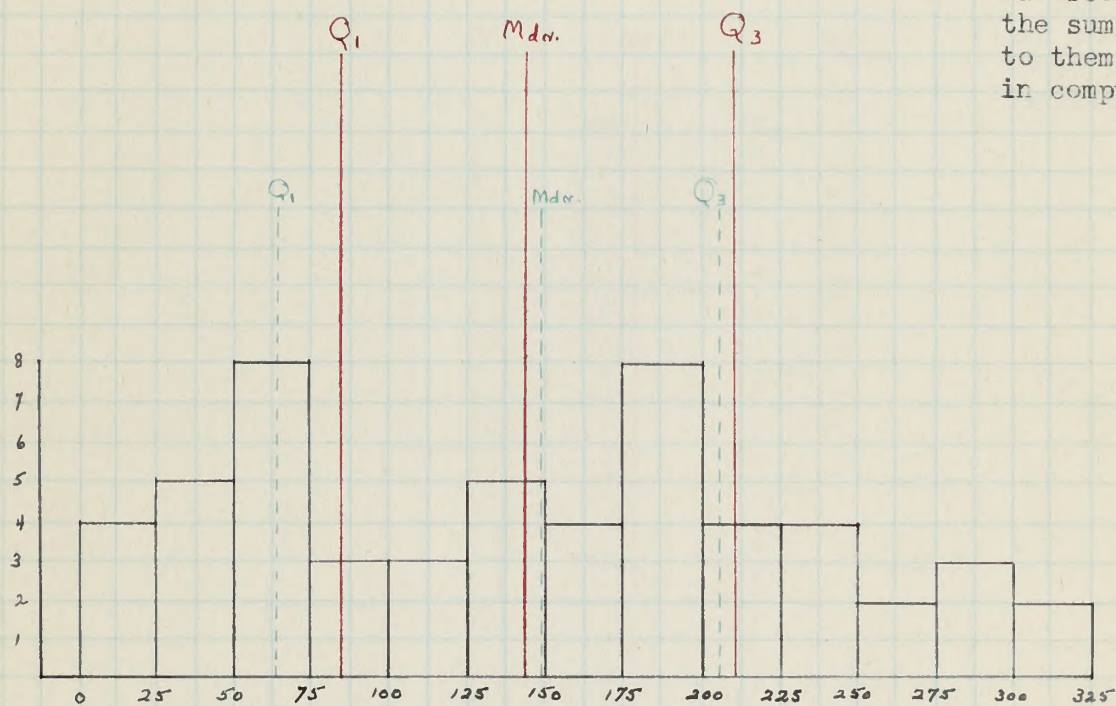
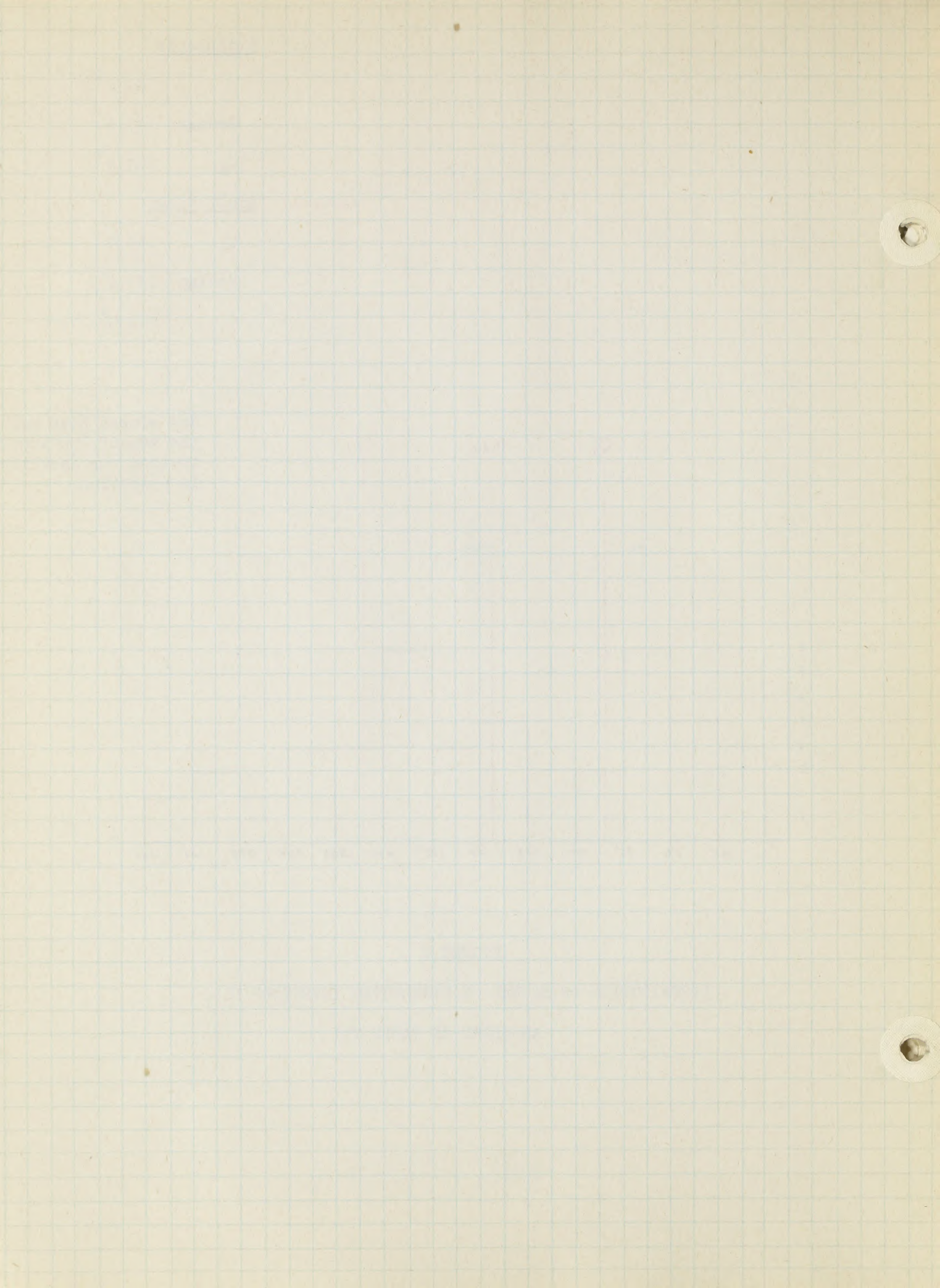


FIGURE 8

DISTRIBUTION OF SCORES ON BERNREUTER INVENTORY FI-C

AS SHOWN IN TABLE VII







----- AttendantsQ<sub>1</sub> 92.3\*

Median 123.9\*

Q<sub>3</sub> 154.0\*----- Adult WomenQ<sub>1</sub> 92.0 \*

Median 128.4 \*

Q<sub>3</sub> 167.0 \*

\*Raw scores haven  
had the sum of 150  
added to them for  
facility in computing.

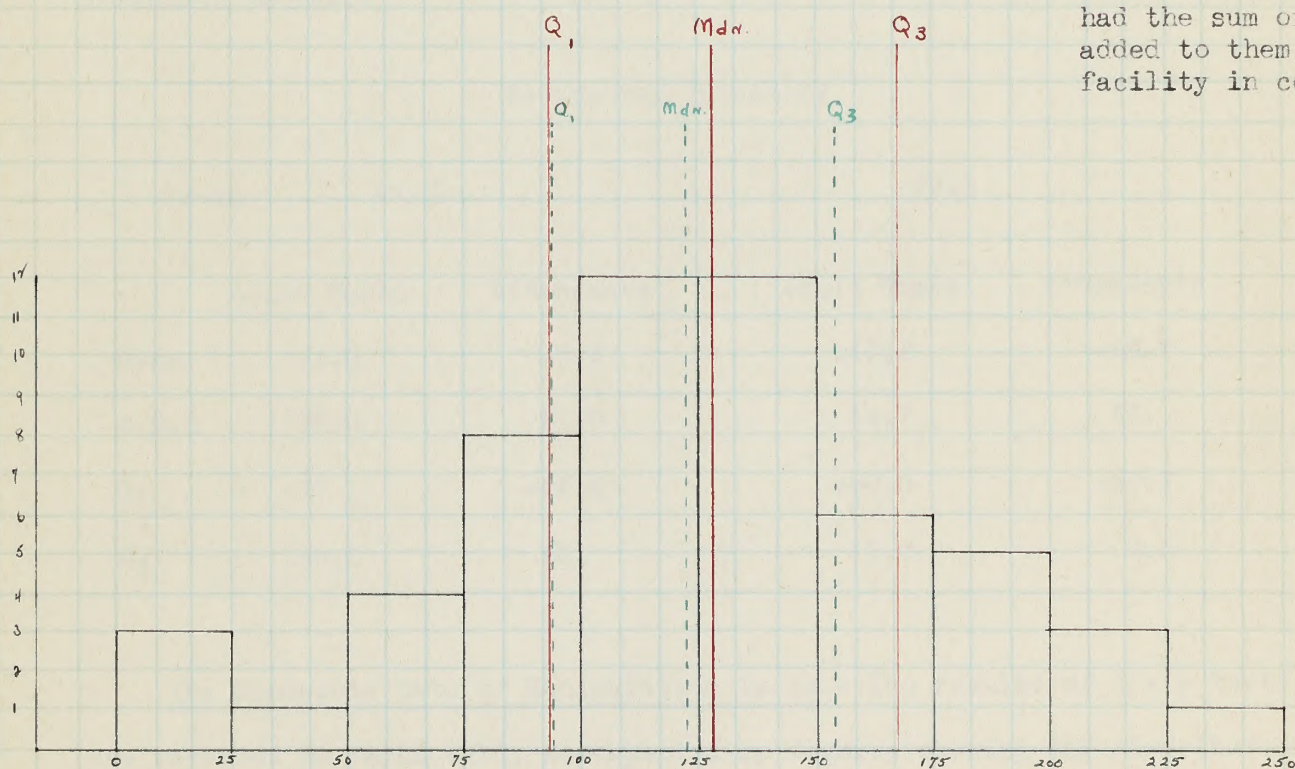
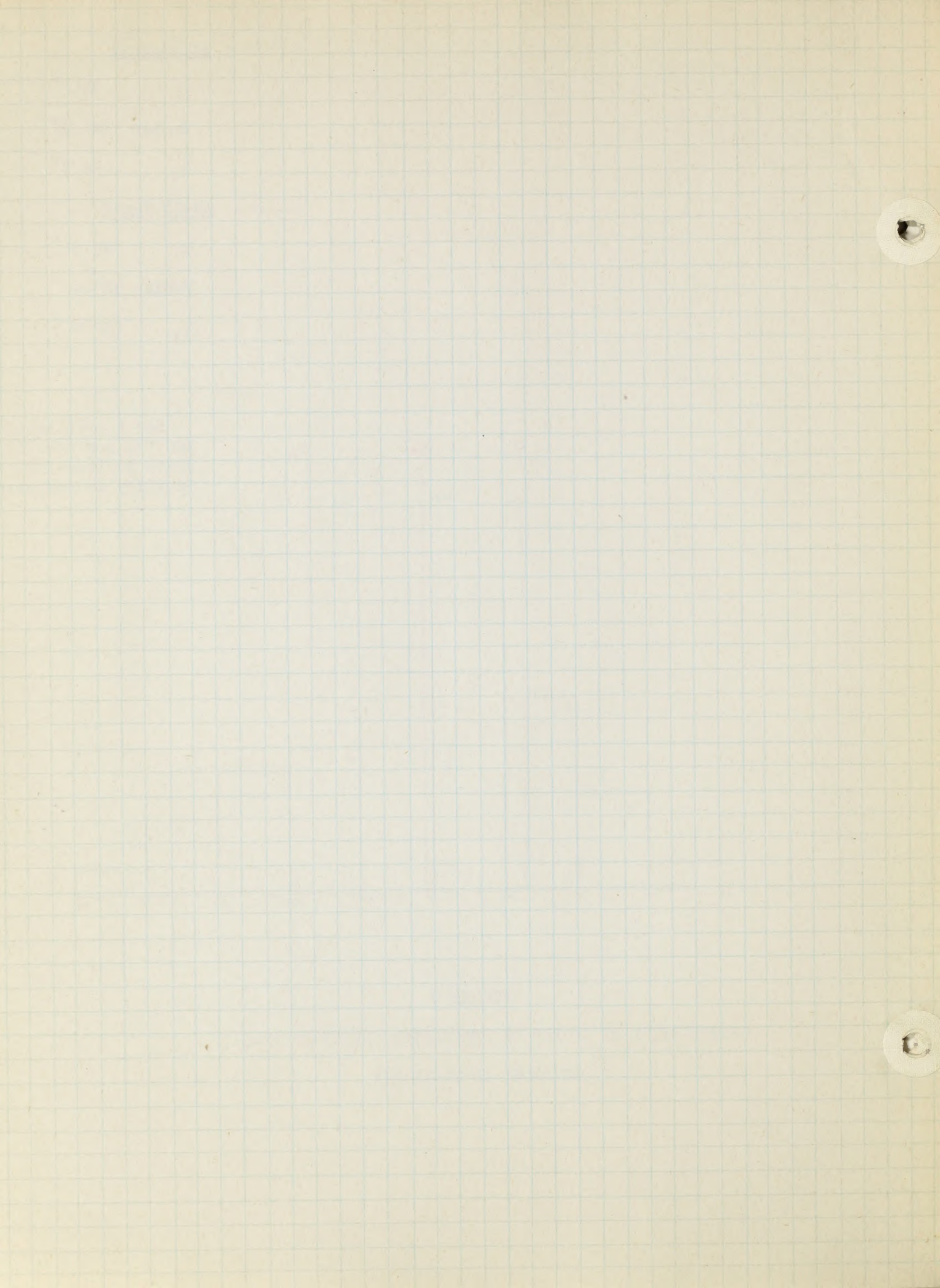


FIGURE 9

DISTRIBUTION OF SCORES ON BERNREUTER INVENTORY F2-S

AS SHOWN IN TABLE VII







The evidence from an inspection of these histograms is that there is a substantial amount of similarity between the attendant group and adult women. This would suggest that the attendant group is representative of adult women in general so far as personality adjustment is measured by this inventory. That this is not an ideal situation is obvious. By all the standards for the successful nurse, she should be superior to the general population in emotional stability.

It is of interest to compare the groups, subtracting 150 from attendant scores.

#### Bernreuter Inventory

Test:	F1-C		F2-S	
	Adult Women	Attendants	Adult Women	Attendants
Mean	-1.0	-5.3	-18.8	-26.7
S.D.	90.0	85.0	54.7	50.
Q <sub>1</sub>	-77	-85.9	-58.0	-57.7
Q <sub>3</sub>	60.0	57.	17.0	4.5

The Minnesota Rate of Manipulation Tests.--The results of these tests are reported in TABLE VIII, accompanied by figures showing the distribution of scores graphically. Again, the attendants as a group score a little below the general population, although they more nearly approximate that group in the Turning than in the Placing Test.

The following table shows the results of the analysis of the data obtained from the experiments conducted on the effect of the concentration of the solution on the rate of the reaction. The results are given in the following table. The rate of the reaction is given in the following table. The rate of the reaction is given in the following table.

Rate of reaction	Concentration of solution	Rate of reaction	Concentration of solution
0.05	0.1	0.05	0.1
0.10	0.2	0.10	0.2
0.15	0.3	0.15	0.3
0.20	0.4	0.20	0.4

The following table shows the results of the analysis of the data obtained from the experiments conducted on the effect of the concentration of the solution on the rate of the reaction. The results are given in the following table. The rate of the reaction is given in the following table. The rate of the reaction is given in the following table.



TABLE VIII  
 FREQUENCY DISTRIBUTION OF RAW SCORES  
 ON THE  
 MINNESOTA RATE OF MANIPULATION TEST  
 FOR 54 ATTENDANT NURSES

Raw Scores	PLACING		TURNING	
	Frequency for this group	Percentage of this group	Frequency for this group	Percentage of this group
290-299	1	1.8		
280-289	1	1.8		
270-279	4	7.4		
260-269	3	5.5		
250-259	7	12.9	2	3.6
240-249	13	24.0	-	-
230-239	9	16.7	2	3.6
220-229	8	14.8	7	12.9
210-219	5	9.2	3	5.5
200-209	3	5.5	8	14.8
190-199			9	16.7
180-189			14	25.9
170-179			4	7.4
160-169			2	3.6
150-159			2	3.6
140-149			1	1.8
Total	54	99.6	Total	54
				99.4
Mean -	241.1		Mean -	197.0
S.D. -	20.		S.D. -	23

# TABLE 1

PERCENTAGE DISTRIBUTION OF THE POPULATION  
BY SEX AND AGE GROUP  
IN THE UNITED STATES  
1950

Age Group	Male	Female	Total
Under 5	10.1	10.1	10.1
5-9	9.1	9.1	9.1
10-14	8.1	8.1	8.1
15-19	7.1	7.1	7.1
20-24	6.1	6.1	6.1
25-29	5.1	5.1	5.1
30-34	4.1	4.1	4.1
35-39	3.1	3.1	3.1
40-44	2.1	2.1	2.1
45-49	1.1	1.1	1.1
50-54	1.1	1.1	1.1
55-59	1.1	1.1	1.1
60-64	1.1	1.1	1.1
65-69	1.1	1.1	1.1
70-74	1.1	1.1	1.1
75-79	1.1	1.1	1.1
80-84	1.1	1.1	1.1
85-89	1.1	1.1	1.1
90-94	1.1	1.1	1.1
95-99	1.1	1.1	1.1
100 and over	1.1	1.1	1.1
Total	100.0	100.0	100.0

Source - U.S. Census Bureau

U.S. - 1950

U.S. - 1950

U.S. - 1950



----- Attendants

$Q_3$  226.3

Median 241.5

$Q_1$  253.0

----- General Population

$Q_3$  217.0

Median 233.0

$Q_1$  249.0

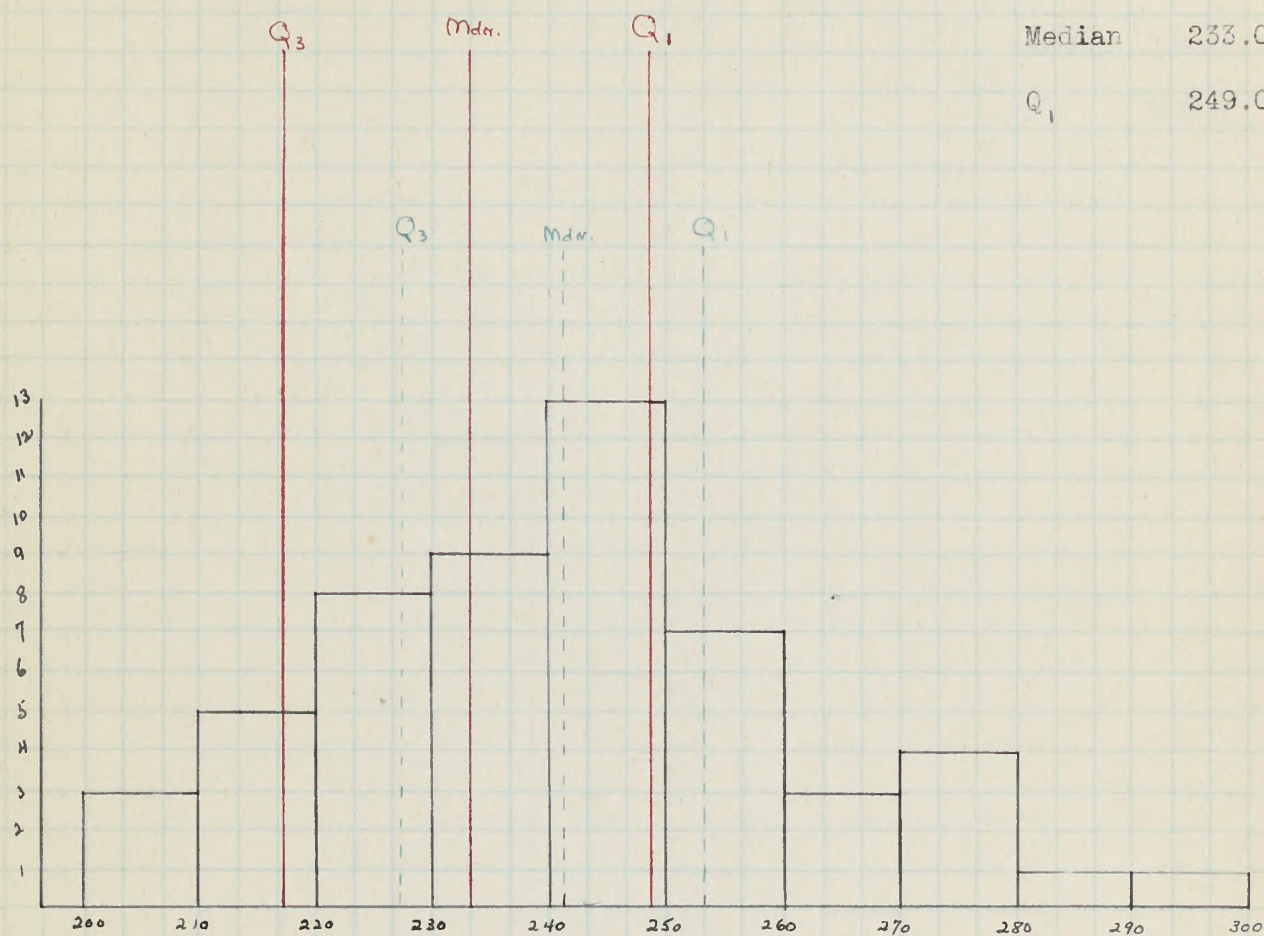


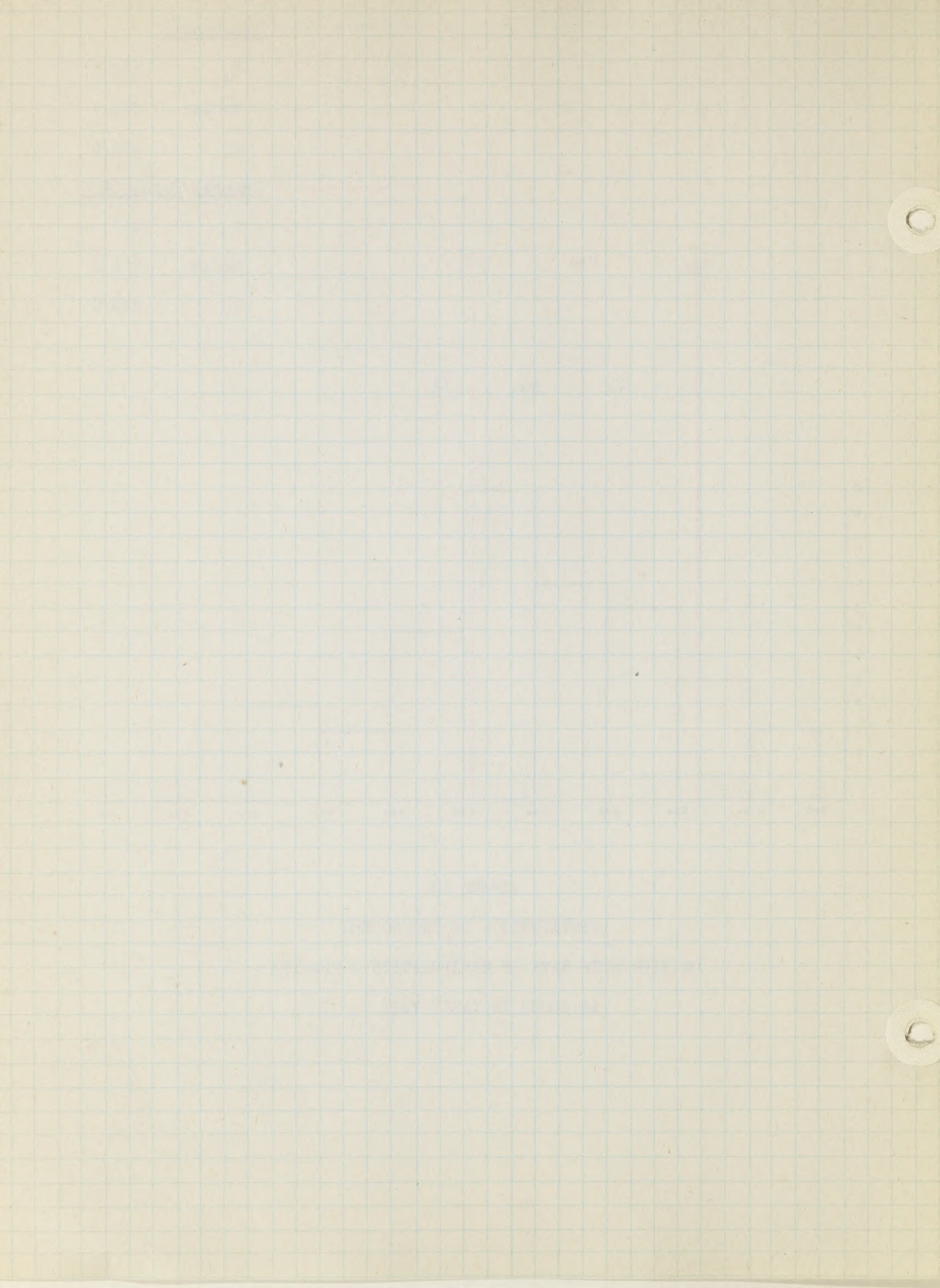
FIGURE 10

DISTRIBUTION OF RAW SCORES

ON MINNESOTA RATE OF MANIPULATION - PLACING -

AS SHOWN IN TABLE VIII







----- AttendantsQ<sub>3</sub> 182.7

Median 194.4

Q<sub>1</sub> 211.1----- General PopulationQ<sub>3</sub> 175.0

Median 192.0

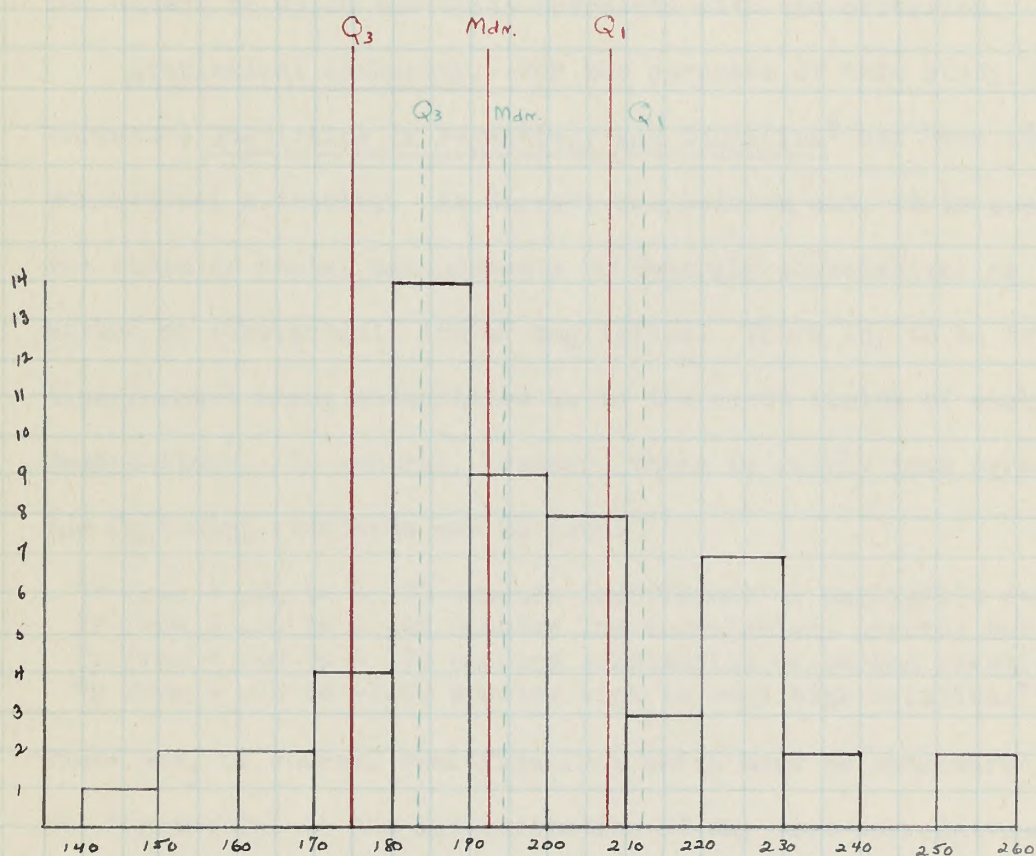
Q<sub>1</sub> 209.0

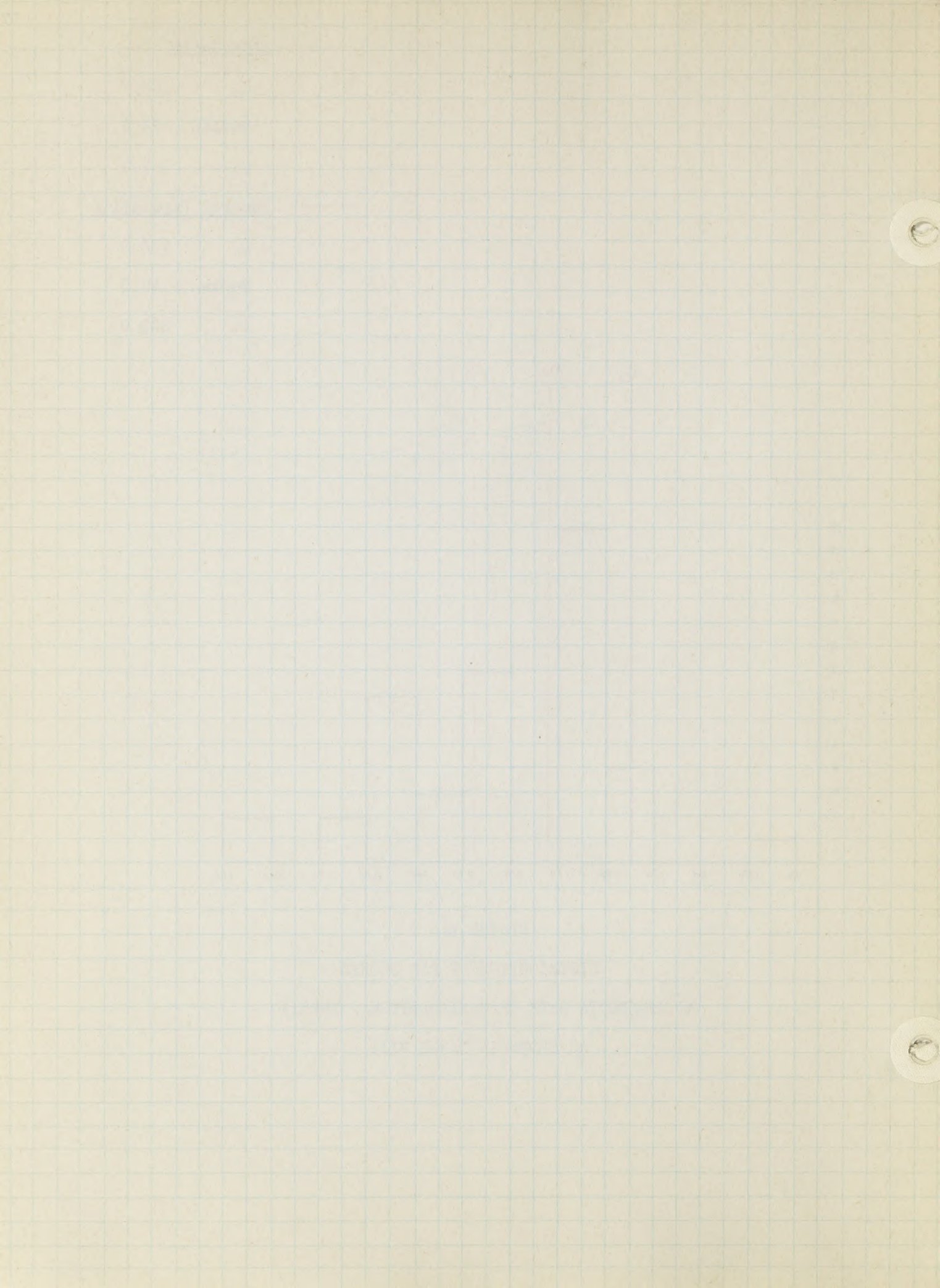
FIGURE 11

DISTRIBUTION OF RAW SCORES

ON MINNESOTA RATE OF MANIPULATION - TURNING -

AS SHOWN IN TABLE VIII







### Criterion for Selection of Battery

"In selecting tests to be included in a battery," says Bingham, "it is advisable to include those which correlate most closely with the criterion, and least closely with each other."<sup>1</sup> This section, therefore, reports the extent to which the tests correlate with each other, the criterion and the manner through which it was determined, and finally, the extent to which the tests correlate with the criterion.

Statistical authority.--For the purposes of this study, Henry E. Garrett's Statistics in Psychology and Education<sup>2</sup> has been used for statistical authority. As Garrett has pointed out, it is customary in the field of mental measurements to describe correlations as being high, marked or substantial, low or negligible. There is, to be true, some disagreement among authorities as to the exact limits of each of these demarcations. In general, however, there is fairly good agreement that the following standards may be used:

- "r from  $\pm .00$  to  $\pm .20$  denotes indifferent or negligible relationship;
- "r from  $\pm .20$  to  $\pm .40$  denotes low correlation; present but slight;
- "r from  $\pm .40$  to  $\pm .70$  denotes substantial or marked relationship;
- "r from  $\pm .70$  to  $\pm 1.00$  denotes high to very high relation."<sup>3</sup>

There are, of course, qualifications which must be considered. Since these are fundamental to the interpretation of any test correlations, they will be considered as pertinent to an intelligent interpretation of TABLES IX, X, and XI.

Qualifications to be considered.--These qualifications, briefly, concern (1) the nature of the material dealt with, (2) the  $PE_r$ , (3) the

<sup>1</sup>Walter Van Dyke Bingham, op. cit., p. 220.

<sup>2</sup>Henry E. Garrett, Statistics in Psychology and Education, 495 pp.

<sup>3</sup>Ibid., p. 342.

"The following facts are to be noted in a general way: (1) The

isolation of certain areas with mountains and forests, and

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size and variability of the group, (4) the reliability coefficients of the tests, and (5) the purpose for which  $r$  was computed. These are considered in order. (1) Between certain traits, such as general intelligence and school grades, the correlation to be considered high must be higher than between others, such as physical and mental functions, since the former have  $r$ 's usually running from  $\pm .40$  to  $\pm .60$ . In the field of vocational testing, says Garrett, "the  $r$ 's between test batteries and measures of aptitude represented by various criteria are rarely above .50; and  $r$ 's above this figure would be considered surprisingly high."<sup>1</sup> (2) If the  $r$  is four times the PE, the  $r$  is generally agreed to be significant. (3) Accurate interpretation does not permit that from the data obtained on this very small group prediction be made as to the probable correlation on a large group. (4) The reliability of the individual tests has been reported in Chapter III. (5) The  $r$  which is used to predict scores of individuals from one test to another must be higher than the  $r$  "the purpose of which is simply to provide a measure of relationship between two tests of achievement in the group as a whole."<sup>2</sup>

#### Conclusions Drawn from Data in TABLE IX

TABLE IX.--With these qualifications in mind, the following conclusions have been drawn from the data presented in TABLE IX: of the thirty-six coefficients of correlation only five are found to be significant; twenty-five denote negligible relationship, six some relationship but exceedingly slight. Of the five which show sufficient relationship to investigate, we

<sup>1</sup> Henry E. Garrett, op. cit., p. 343.

<sup>2</sup> Ibid., p. 343.





TABLE IX  
CORRELATION\* BETWEEN INDIVIDUAL TESTS  
INCLUDED IN THE BATTERY  
ADMINISTERED TO 55 ATTENDANT NURSES

Tests:	OTIS	MINNESOTA Na. - Nu.		MINNESOTA Pl. - Tu.		BERNREUTER F1 - F2		MORT	WASHBURNE
OTIS		.31 ±.08	.48 ±.06	.01 ±.09	-.02 ±.09	.08 ±.08	-.06 ±.08	.55 ±.06	-.26 ±.08
Names	.31 ±.08		.74 ±.04	-.07 ±.09	-.13 ±.08	.05 ±.08	.01 ±.08	.51 ±.06	-.006 ±.09
Numbers	.48 ±.06	.74 ±.04		-.04 ±.09	-.03 ±.09	.01 ±.09	-.04 ±.09	.23 ±.08	.03 ±.09
Placing	.01 ±.09	-.07 ±.09	-.04 ±.09		.61 ±.05	-.09 ±.09	.03 ±.09	-.11 ±.09	-.04 ±.09
Turning	-.02 ±.09	-.13 ±.08	-.03 ±.09	.61 ±.05		-.18 ±.08	-.08 ±.09	-.14 ±.08	-.25 ±.08
F1-C	.08 ±.08	.05 ±.08	.01 ±.09	-.09 ±.09	-.18 ±.08		.10 ±.08	.08 ±.09	.34 ±.08
F2-S	-.06 ±.08	.01 ±.08	-.04 ±.09	.03 ±.09	-.08 ±.09	.10 ±.08		.05 ±.09	.03 ±.09
MORT	.55 ±.06	.51 ±.06	.23 ±.08	-.11 ±.09	-.14 ±.08	.08 ±.09	.05 ±.09		-.21 ±.08
WASH.	-.26 ±.08	-.006 ±.09	.03 ±.09	-.04 ±.09	-.25 ±.08	.34 ±.08	.03 ±.09	-.21 ±.08	

\*  
To be read as follows: The correlation between Otis  
and Minnesota Names is .31 with P.E. plus or minus  
.08; etc.

MINNESOTA Clerical Rate

# TABLE II

Correlation between variables  
included in the study  
adjusted to 25 years' age

Variable	OTIS	STRENGTH	STRENGTH	STRENGTH	STRENGTH	STRENGTH	STRENGTH	STRENGTH	STRENGTH
	1	2	3	4	5	6	7	8	9
OTIS	1.00								
STRENGTH	0.75	1.00							
STRENGTH	0.75	0.75	1.00						
STRENGTH	0.75	0.75	0.75	1.00					
STRENGTH	0.75	0.75	0.75	0.75	1.00				
STRENGTH	0.75	0.75	0.75	0.75	0.75	1.00			
STRENGTH	0.75	0.75	0.75	0.75	0.75	0.75	1.00		
STRENGTH	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.00	
STRENGTH	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.00

For each variable, the correlation between OTIS

and STRENGTH is 0.75, which is the same

0.75: 0.75



find that correlations lie as follows:

Otis and Minnesota Number (.48  $\pm$ .06)

Otis and Mort (.55  $\pm$ .06)

Minnesota Names and Numbers (.74  $\pm$ .04)

Minnesota Names and Mort (.51  $\pm$ .06)

Minnesota Rate Placing and Turning (.61  $\pm$ .05)

Since three of these correlations involve the Minnesota Clerical Test, it might be well to consider whether the test should be dropped from the battery on the basis that it measures some factor measured by the test with which it correlates. This would be on the assumption, of course, that the test(s) with which the Minnesota correlates would be retained. The highest correlation is between the two parts of the Minnesota Clerical, the Names and Numbers. The author reports a correlation coefficient of .66 for these two but adds that "clerical number checking measures more of a numerical factor and the clerical name checking more of a verbal factor."<sup>1</sup> This would seem to be borne out by the fact that it is the number test which correlates with the Otis, which is not primarily a verbal test, and the name test which correlates with Mort, which has obviously no numerical factors. It would seem that if the Otis and Mort were both retained, the Minnesota Clerical could be discarded, but only if both were retained.

Ziegler reports a correlation between turning and placing on the Minnesota Rate of Manipulation of .57 and on the basis of this concludes "hand speed and finger speed are rather different traits."<sup>2</sup> On the basis that "r from  $\pm$ .40 to  $\pm$ .70 denotes substantial or marked relationship"<sup>3</sup> the writer should take exception to the author's conclusions. There is,

<sup>1</sup>Dorothy M. Andrew, and Donald G. Paterson, "Manual of Directions."

<sup>2</sup>W.A. Ziegler, "Minnesota Rate of Manipulation Test Manual," p. 2.

<sup>3</sup>Henry E. Garrett, op. cit., p. 342.

These two correlations are as follows:

Oil and Gasoline (1931-1932) 0.95

Oil and Gasoline (1933-1934) 0.95

Gasoline and Gasoline (1935-1936) 0.95

Gasoline and Gasoline (1937-1938) 0.95

Gasoline and Gasoline (1939-1940) 0.95

These two correlations are as follows: Oil and Gasoline (1931-1932) 0.95

Oil and Gasoline (1933-1934) 0.95

Gasoline and Gasoline (1935-1936) 0.95

Gasoline and Gasoline (1937-1938) 0.95

Gasoline and Gasoline (1939-1940) 0.95

The highest correlation is between the two series of the Gasoline (1931-1932)

and Gasoline (1933-1934). The other series are correlated in the following way:

Oil and Gasoline (1931-1932) 0.95

Oil and Gasoline (1933-1934) 0.95

Gasoline and Gasoline (1935-1936) 0.95

Gasoline and Gasoline (1937-1938) 0.95

Gasoline and Gasoline (1939-1940) 0.95

Gasoline and Gasoline (1931-1932) 0.95

Gasoline and Gasoline (1933-1934) 0.95

Gasoline and Gasoline (1935-1936) 0.95

Gasoline and Gasoline (1937-1938) 0.95

Gasoline and Gasoline (1939-1940) 0.95

Gasoline and Gasoline (1931-1932) 0.95

Gasoline and Gasoline (1933-1934) 0.95

Gasoline and Gasoline (1935-1936) 0.95

Gasoline and Gasoline (1937-1938) 0.95

Gasoline and Gasoline (1939-1940) 0.95



however, no substantial difference between the correlation obtained in this study ( $.61 \pm .05$ ) and that found by Ziegler (.57) but the size and variability of the group may be the differing factor. If the author is justified in concluding that the two tests measure different traits, it would seem essential to include both of these in this battery until further evidence is procured to indicate the contrary.

The only other significant relationship is between Otis and Mort. Since the validity of the Mort was established only by referral to experts and since the validity of Otis is, as Paterson has said, "as valid as.... most of the standard group intelligence tests at the high school level,"<sup>1</sup> the Otis is obviously the more valid test. If there were a question of choosing between these two tests, the Otis would without question be the one to retain. There is not sufficient evidence yet to make this choice advisable.

From this evidence it would seem justifiable to conclude that, with the possible exceptions discussed above, the tests used in this battery measure different traits and so fulfill one of Bingham's prerequisites for an acceptable battery.

#### Choice of Criterion

Bingham's stipulation that the battery should include those tests which correlate most closely with the criterion presupposed that a criterion had been set up. "The trouble," he said, "arises from the fact...that really good objective criteria are so rare."<sup>2</sup> They are, he said, extremely

<sup>1</sup> Donald G. Paterson, Gwendolen G. Schneider, and Edmund G. Williamson, Student Guidance Techniques, p. 67.

<sup>2</sup> Walter Van Dyke Bingham, op. cit., p. 223.





difficult to define and to measure. Finding satisfactory criteria for this study has proved no exception.

To define "success" in terms of the vocation of attendant nurse offered many difficulties. One attendant might be successful on a baby case; the same attendant might be considered unsatisfactory with elderly patients. An attendant who is especially good at the housekeeping tasks might fill a position exceptionally well when the mother had to be away from home; but if the mother returned to her home and the attendant had to perform simple nursing duties under close supervision, she might be quite unsatisfactory. Until the occupation of attendant nurse is standardized, at least to some degree, it will be impossible to define success by criteria established by the employer alone.

Criteria considered.--For this reason four other possible criteria were studied: the rating of the Supervisor; the rating of the Registry Director; the marks given to the attendant by the hospital in which she was trained; and the marks given her by the School itself.

The Supervisor.--The Supervisor has more direct contact with the attendants over a longer period of time than anyone else. She interviews them before they enter the School, supervises them while they are in the School, in the hospital, and during their field work. The present Supervisor has been at the School for many years and consequently knows better than anyone else their characteristics, their adjustment in School, in the hospital, and on duty.

The Director of the Registry.--The Director is responsible for the placement of the attendants on their jobs. She knows them through one criterion, how well they do their work as evidenced by the reports received from employers, doctors, or - when they are on field work - from the Supervisor. Length of employment in nursing is not, as in some occu-





pations, a criterion of success except in the rare cases where a permanent attendant is needed. Dismissal from a job is a definite criterion, of course, but those cases are happily rare. In general, the Registry Director knows the attendant's employability.

The Supervisor and the Registry Director were, therefore, asked separately to list the subjects of this study in the order of their proficiency, the first on the list to be the attendant whom they would send out on a job if a doctor called and asked for "the best attendant you have available at this time," the second to be the next sent out, and so forth. The only criterion for the best being what the individual thought, because of her knowledge of or experience with the attendant, to be the one to fill the position.

Hospital Marks.--The hospital at which each student trained and the School itself marked the students on various subjects, both academic and practical. No adequate standards for grading have been set up at either the School or the various affiliated hospitals. Each hospital marked according to its individual preference, and there have been ten to fifteen different affiliated hospitals over the course of years.

School Marks.--The School itself has no reliable grading procedure. Under the present system, for example, A is 95-100, A<sup>-</sup> is 90-94, B<sup>+</sup> is 86-89, and B is 85. There are no qualifying statements as to what each means. In earlier classes, and it must be remembered that the subjects of this study graduated from the School as early as 1919, the hospital ratings were sometimes in percents and sometimes in letter grades. To reduce School and hospital ratings into a common denominator meant a somewhat free conversion of letter grades into percents. Averages were then taken; and finally the subjects were ranked according to these averages.

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The result of these steps was, therefore, four rankings,--one from the Supervisor, one from the Registry, one on School marks, and one on hospital marks. These were averaged to give a total ranking. Correlations were then made between each ranking and between each ranking and the total rank. The results are shown in TABLE X.

#### Conclusions Drawn from Data in TABLE X

Both because of the previously noted inadequacies of the School and hospital ratings and now because of their low correlation with each other ( $.03 \pm .08$ ) and with the other possible criteria, they were eliminated as possible criteria. The possibility of using the Total Rank as criteria was also considered and dismissed, since it included the very unsatisfactory School and hospital rankings.

This left the Supervisor's and the Registry rankings. Since they showed substantial relationship, i.e.  $.51 \pm .06$  with each other, but not as high as might be expected, both of these criterion were used in the next step, which was the correlation of the tests with the criteria.

#### Conclusions Drawn from Data in TABLE XI

The results of inter-correlations between the chosen criteria, the Registry Ranking and Supervisor's Ranking, and the test battery are shown in TABLE XI. A glance at this table will show that there is not even "low correlation; present but slight."

The implications to be drawn from this are plain. As was pointed out earlier in this chapter, one of the stipulations of a good battery is that the tests shall correlate closely with the criteria. Since there is a negligible relationship between this battery and the chosen criteria, the obvious conclusion is that either the tests were not well chosen or the





TABLE X  
CORRELATIONS BETWEEN SELECTED CRITERIA

Criteria	Total Rank	Supervisor's Ranking	Registry Ranking	School Marks	Hospital Marks
Total Rank		.77 ±.03	.64 ±.04	.60 ±.05	.23 ±.08
Supervisor's Ranking	.77 ±.03		.51* ±.06	.20 ±.08	.01 ±.08
Registry Ranking	.64 ±.04	.51* ±.06		.23 ±.08	-.31 ±.03
School Marks	.60 ±.05	.20 ±.08	.23 ±.08		.03 ±.08
Hospital Marks	.23 ±.08	.01 ±.08	-.31 ±.03	.03 ±.08	

\* The rank-order correlation coefficient of these two criterion  
was .54 .066.

# Table 2

## Geographical Distribution of the

Country	Area	Population	Urban	Rural
United States	3,797,000	150,000,000	75,000,000	75,000,000
Canada	9,971,000	22,000,000	11,000,000	11,000,000
Mexico	1,972,557	15,000,000	7,500,000	7,500,000
Central America	217,000	10,000,000	5,000,000	5,000,000
Caribbean	1,000,000	10,000,000	5,000,000	5,000,000
South America	17,000,000	100,000,000	50,000,000	50,000,000
Europe	10,000,000	200,000,000	100,000,000	100,000,000
Asia	30,000,000	1,000,000,000	500,000,000	500,000,000
Africa	20,000,000	200,000,000	100,000,000	100,000,000
Oceania	9,000,000	10,000,000	5,000,000	5,000,000

The total population of the world is approximately 2,500,000,000.

Source: U.S. Census Bureau, 1950.



TABLE XI

## CORRELATIONS BETWEEN SELECTED CRITERIA AND TEST BATTERY

Tests:	OTIS	MINNESOTA		MINNESOTA		BERNREUTER		MORT	WASHBURNE
		Na. - Nu.		Pl.- Tu.		F1 - F2			
Registry	.08	.18	.02	-.11	-.16	-.03	.13	.10	-.05
Ranking	±.08	±.08	±.09	±.08	±.08	±.08	±.08	±.09	±.09
Supervisor's	.13	.10	-.04	-.10	-.01	-.07	.08	.19	-.19
Ranking	±.08	±.08	±.09	±.08	±.09	±.08	±.08	±.08	±.08

C  
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criterion unsatisfactory. The former alternative is supposedly ruled out, since the battery fulfilled Bingham's second stipulation, that the tests should correlate least closely with each other. This was shown in TABLE IX and discussed earlier in this chapter.

It is therefore probably justifiable to conclude that the criteria are at fault. The inadequacies of these have been pointed out earlier in this chapter. If adequate and reliable criteria could be established, it might well be that the chosen battery could validly be used for predictive purposes. This would make an interesting problem for further investigation.





## CHAPTER V

### SUMMARY AND CONCLUSIONS

The purpose of this study was to assemble a battery of standardized, objective tests which would measure those aptitudes characteristic of the successful attendant nurse, and to determine the predictive value of the tests in signaling out the successful nurse.

To do this, a battery of standardized, objective tests was assembled. Each test was chosen after consideration of the characteristics to be measured, after consultation with experts in educational measurements, and after critical scrutiny of the validity and reliability of each instrument.

The battery as assembled was then administered to fifty-five graduate attendants chosen at random on the basis of availability. This was not in accordance with planned procedure but was a practical necessity. The tests were administered at different intervals since it was impossible to assemble all the subjects together at any time or to keep them all together for the entire testing period. The examiner was unable to administer all the tests herself, but did have the help of an able and trained assistant.

The procedure was statistical from this point on. From the data obtained, inter-correlations by the product-moment were obtained between the various tests. The results, with the possible exception of the Otis and Mort, each of which correlated to a substantial degree with a different section of the Minnesota Clerical and with each other ( $.55 \pm .06$ ), showed that there was no appreciable relationship between any two tests. Thus did the battery fulfill the stipulation that tests in a battery should





correlate least closely with each other.

The next step, and one fraught with difficulties, was to set up a criterion against which the battery might be validated. No adequate criterion was available. Five criteria were considered. Inter-correlations between these showed a negligible relation between school and hospital marks and the other criteria. Since the total rank included these two criteria, it was concluded that this too was unreliable as a criteria. The two remaining criteria, rankings of the subject by the person supervising their training and by the person responsible for their placement, showed a degree of relationship. Neither was sufficiently marked to warrant the discarding of either criterion in favor of the other.

The selected battery was then correlated with these two criteria, by the product-moment method. Since this study was made for the purpose of predicting, the scores were studied from that point of view. There was not, as was pointed out in the last chapter, any significant relationship between the tests and either criterion. In fact, the highest correlation was only .19, which was between the Supervisor's Ranking and the Mort Test. Such negligible correlations negated any consideration of this particular battery as an instrument for prediction.

While the primary purpose of this study was thus not achieved, certain very pertinent conclusions can be drawn. Foremost among these is the fact that no reliable study can be made and no justifiable conclusions drawn until better criteria can be obtained. As Bingham says, "any quantitative measure of the degree of that (occupational) achievement is at best a rough one and subject to error."<sup>1</sup> It is necessary, therefore, to select

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<sup>1</sup>Walter Van Dyke Bingham, op. cit., p. 219.





measures which are as nearly objective as possible. The criteria used in this study, perforce, did not meet this requirement. Like Williamson, we too feel justified in assuming that "the tests could be used to great advantage in selecting candidates for nursing training if instructors' grades were more valid."<sup>1</sup>

Whether any reliable conclusions can be drawn from this study as to the characteristics of the average graduate of the Household Nursing Association Training School for Attendant Nursing is a matter requiring further investigation and should prove to be an interesting and profitable study. What can be concluded from this study is the type of individual who is average for the group tested. She can be described, on the basis of the test results, as follows: she has an I.Q. of 92.4, which is equivalent to a grade status of 9.1; she does considerably less well in checking differences in names and numbers than does the average adult woman gainfully occupied; her score on a test of judgments characteristic of the socially competent person is the same as that obtained by the average grade 11 student, who, in contrast to the attendant, was limited on the amount of time she could take in filling out the test; she is perhaps better adjusted than the average college girl, but this must be qualified by reporting that 22% of the attendant's group scored so high on the sub-test of truthfulness that the author of the test would consider the results invalid; and, finally, her arm and hand dexterity is but slightly below the average for the general population.

There is, certainly a fertile field for further investigation in connection with this subject. With adequate criteria of success, with the

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<sup>1</sup> E.G. Williamson et al., "Selection of Student Nurses," Journal of Applied Psychology, XXII (April, 1938), p. 130.





assurance that the subjects were statistically representative of the graduates, this battery might well be used for the purpose for which it was assembled. In the meantime, the material obtained could be used most advantageously for counseling purposes. That this is not possible, because the subjects were promised by the School that the results would be reported only in the form of general summaries and never individually, is to be regretted. Fortunately no such promise was given to the incoming student groups, so that material can be used for individual guidance.

### Recommendations

Certain recommendations, other than establishing adequate criteria through instituting standard methods of grading and of evaluating the work of the student and nurse, naturally occur to anyone working closely with such a group and with this material. They are listed here briefly in the hope that they may stimulate thought and consideration on the part of the Staff and advisers of the School. They are, however, the results of the writer's experience with the attendants and on this study, not recommendations made on the basis of a statistical analysis of the data.

1. A small battery of tests should, for a period of time, perhaps two years, be administered to each applicant.

The battery should include one test of mental ability, one of manual dexterity, and one personality inventory.

It is suggested that these might be the Otis S-A Higher Examination, the Minnesota Rate of Manipulation, and the Washburne S-A Inventory.





2. This battery should be administered to all the applicants at one time by a trained examiner.
3. All applicants whose scores place them on the intelligence test in the dull or border-line zones should be retested. If a retest confirms this evaluation, they should be arbitrarily denied admission to the course. (Good personnel practices would require that these be referred to some social agency or counseling service which might be able to help them make a satisfactory vocational adjustment according to their level of ability.)
4. The scores obtained from the dexterity tests should be similarly scrutinized. Any applicant varying more than 1σ from the mean for the general population should be retested. If found still to vary to such a degree, she should be admitted to the School only if all other evidence, including previous experience, scholastic marks, and personality seem to justify taking her.
5. The personality inventory scores should be considered in relation to those obtained for adult women in the general population. Any individual whose score places her extremely high or low should arbitrarily be refused admission to the School.
6. The test results for each applicant should be interpreted to the Staff, both at the School and in the hospital, in such a way as to be intelligible to those not accustomed to using such information, so that the student could be helped better to adjust and develop.





7. At the end of a predetermined length of time, the results of all tests could then be assembled and a study, similar to this in scope, could be undertaken. On the basis of such, reliable conclusions and recommendations for the use or abandonment of a test battery for selective purposes could be justifiably made.
8. Finally, it should be categorically conceded that only a trained psychologist should supervise this entire program.

If such a study could be undertaken, the results, with those found in this study, and those which will be reported from an analysis of the data obtained by giving the battery used here to three in-coming classes, should be highly significant.





## BIBLIOGRAPHY

- Andrew, Dorothy M., and Paterson, Donald G., Manual of Directions: Minnesota Vocational Test for Clerical Workers. New York: The Psychological Corporation.
- Aul, H. Louise, "Nursing Aptitude Tests." American Journal of Nursing (December, 1940), p. 1358.
- Bernreuter, Robert G., Manual for the Personality Inventory. Stanford University: Stanford University Press, 1935.
- Bingham, Walter Van Dyke, Aptitudes and Aptitude Testing. New York: Harper and Brothers, 1937. ix 390.
- Bregman, Elsie O., "The Performance of Student Nurses on Tests of Intelligence." Nursing Education Bulletin, New Series, 11. March, 1933.
- Buros, Oscar K., Education, Psychological and Personality Tests of 1936. New Brunswick, New Jersey: Rutgers University, 1937. 141 pp.
- Byrd, Oliver E., Byrd Health Attitude Scale. Stanford University: Stanford University Press, 1940.
- Clark, G. Y., and South, E. B., "Some Suggestions for Measuring Nursing Aptitude." American Journal of Nursing, XXXV (September, 1935), pp. 865-71.
- Earle, M. G., "Relation between Personality, Character Traits and Intelligence." Journal of Applied Psychology, X (December, 1926), p. 453.
- Garrett, Henry E., Statistics in Psychology and Education. New York: Longmans, Green and Company, 1939. xiv 495 pp.
- Garrison, K. C., "Use of Psychological Tests in the Selection of Student-nurses." Journal of Applied Psychology, XXIII (August, 1939), pp. 461-72.
- MacLean, Malcolm S., "The Selection of Student Nurses and the Treatment of Failures." American Journal of Nursing, XXXII (December, 1932), pp. 1297-1307.
- MacPhail, A. H., "Psychological Tests Applied to Nurses in Training at the Rhode Island Hospital." American Journal of Nursing, XXIX (February, 1929), pp. 203-206.
- Miles, Catherine Cox, "The Personality Development of Student Nurses." American Journal of Nursing, XXXIV (February, 1934), pp. 175-184.





- Mort, Paul R. et al., Manual of Directions: Tests of the Socially Competent Person. New York: Teachers College, Columbia University, 1937.
- Otis, Arthur S., Manual of Directions and Key: Otis Self-Administering Tests of Mental Ability. Yonkers, New York: World Book Company, 1928.
- Paterson, Donald G., and Darley, John G., Men, Women, and Jobs. Minneapolis: The University of Minnesota Press, 1938. v 145.
- Paterson, Donald G., et al., Student Guidance Techniques. New York: McGraw-Hill Book Company, 1938. xviii 316.
- Potts, Edith M., "Eliminating the Unfit." American Journal of Nursing, XXXVI (November, 1936), pp. 1093-7.
- Potts, Edith M., Performance of 429 Preliminary Student Nurses Arranged in the Order of Their Scores on the Revised Alpha Examination. Rochester, New York: New York State Education Department Report of Regional Conferences (New York State Nurses' Association).
- Potts, Edith M., "Selection of Student Nurses." American Journal of Nursing, XXXXI (May, 1941), pp. 590-7.
- \_\_\_\_\_. A Review of the Year 1939. Boston: Household Nursing Association, 1940. 12 pp.
- Roper, Sylvia Ann, "A Test of Interest in Nursing." Unpublished Master's Thesis, Clark University, 1940.
- Shepard, Katharine, and Lawrence, Charles H., Textbook of Attendant Nursing. New York: The MacMillan Company, 1938. xi - 433 pp.
- South, Earl B., and Clark, Genevieve Y., "Some Uses of Psychological Tests in Schools of Nursing." American Journal of Nursing, XXIX (December, 1929), pp. 1495-1501.
- Stern, Edith M., "Impractical Nurses." Survey Graphic, XXIX (January, 1940), pp. 27-8.
- Stroup, Leora B., "Home Nursing Aides." American Journal of Nursing, XXXX (March, 1940), pp. 255-260.
- \_\_\_\_\_. Subsidiary Workers in the Care of the Sick. New York: Joint Committee of the American Nurses' Association, National League of Nursing Education, National Organization for Public Health Nursing, 1940.
- \_\_\_\_\_. Twenty-first Anniversary Bulletin. Boston: The Household Nursing Association, 1939. 16 pp.





- \_\_\_\_\_. Twenty Years of Attendant Nursing. Boston: The Household Nursing Association, 1939. 11 pp.
- Washburne, John N., Manual For Interpreting Washburne Social-Adjustment Inventory. Yonkers, New York: World Book Company, 1940.
- \_\_\_\_\_. "What do Practical Nurses Do?" American Journal of Nursing, XXXX (August, 1940), p. 889.
- Williamson, E. G. et al., "Selection of Student Nurses." Journal of Applied Psychology, XXII (April, 1938), pp. 119-31.
- Williamson, E. G., and Darley, J.G., Student Personnel Work. New York: McGraw-Hill Book Company, 1937. xvii 313.
- Young, H. H., "Intelligence Rating and Success in Nurses' Training." Journal of Applied Psychology, VIII (December, 1924), pp. 377-389.
- Ziegler, W. A., Minnesota Rate of Manipulation. Educational Test Bureau, 1939.





APPENDIX

## APPENDIX





# OTIS SELF-ADMINISTERING TESTS OF MENTAL ABILITY

By ARTHUR S. OTIS

Formerly Development Specialist with Advisory Board, General Staff, United States War Department

## HIGHER EXAMINATION: FORM A

20

For High Schools and Colleges

Score.....

*Read this page. Do what it tells you to do.*

*Do not open this paper, or turn it over, until you are told to do so. Fill these blanks, giving your name, age, birthday, etc. Write plainly.*

Name.....Age last birthday.....years  
First name, initial, and last name

Birthday.....Class.....Date.....19....  
Month Day

School or College.....City.....

This is a test to see how well you can think. It contains questions of different kinds. Here is a sample question already answered correctly. Notice how the question is answered:

Which one of the five words below tells what an apple is?

1 flower, 2 tree, 3 vegetable, 4 fruit, 5 animal.....( 4 )

The right answer, of course, is "fruit"; so the word "fruit" is underlined. And the word "fruit" is No. 4; so a figure 4 is placed in the parentheses at the end of the dotted line. This is the way you are to answer the questions.

Try this sample question yourself. Do not write the answer; just draw a line under it and then put its number in the parentheses:

Which one of the five words below means the opposite of north?

1 pole, 2 equator, 3 south, 4 east, 5 west.....( )

The answer, of course, is "south"; so you should have drawn a line under the word "south" and put a figure 3 in the parentheses. Try this one:

A foot is to a man and a paw is to a cat the same as a hoof is to a — what?

1 dog, 2 horse, 3 shoe, 4 blacksmith, 5 saddle.....( )

The answer, of course, is "horse"; so you should have drawn a line under the word "horse" and put a figure 2 in the parentheses. Try this one:

At four cents each, how many cents will 6 pencils cost?.....( )

The answer, of course, is 24, and there is nothing to underline; so just put the 24 in the parentheses. If the answer to any question is a number or a letter, put the number or letter in the parentheses without underlining anything. Make all letters like printed capitals.

The test contains 75 questions. You are not expected to be able to answer all of them, but do the best you can. You will be allowed half an hour after the examiner tells you to begin. Try to get as many right as possible. Be careful not to go so fast that you make mistakes. Do not spend too much time on any one question. No questions about the test will be answered by the examiner after the test begins. Lay your pencil down.

*Do not turn this page until you are told to begin.*

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## EXAMINATION BEGINS HERE :

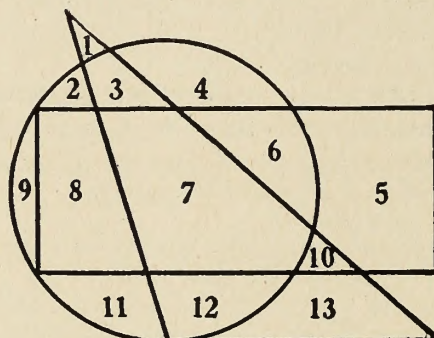
1. The opposite of hate is (?)  
1 enemy, 2 fear, 3 love, 4 friend, 5 joy..... ( )
2. If 3 pencils cost 5 cents, how many pencils can be bought for 50 cents?..... ( )
3. A bird does not always have (?)  
1 wings, 2 eyes, 3 feet, 4 a nest, 5 a bill..... ( )
4. The opposite of honor is (?)  
1 glory, 2 disgrace, 3 cowardice, 4 fear, 5 defeat..... ( )
5. A fox most resembles a (?)  
1 wolf, 2 goat, 3 pig, 4 tiger, 5 cat..... ( )
6. Quiet is related to sound in the same way that darkness is related to (?)  
1 a cellar, 2 sunlight, 3 noise, 4 stillness, 5 loud..... ( )
7. A party consisted of a man and his wife, his two sons and their wives, and four children in each son's family. How many were there in the party?..... ( )
8. A tree always has (?)  
1 leaves, 2 fruit, 3 buds, 4 roots, 5 a shadow..... ( )
9. The opposite of economical is (?)  
1 cheap, 2 stingy, 3 extravagant, 4 value, 5 rich..... ( )
10. Silver is more costly than iron because it is (?)  
1 heavier, 2 scarcer, 3 whiter, 4 harder, 5 prettier..... ( )
11. Which one of the six statements below tells the meaning of the following proverb? "The early bird catches the worm."..... ( )
  1. Don't do the impossible.
  2. Weeping is bad for the eyes.
  3. Don't worry over troubles before they come.
  4. Early birds like worms best.
  5. Prompt persons often secure advantages over tardy ones.
  6. It is foolish to fret about things we can't help.
12. Which statement above tells the meaning of this proverb? "Don't cry over spilt milk.".... ( )
13. Which statement above explains this proverb? "Don't cross a bridge till you get to it.".... ( )
14. An electric light is related to a candle as an automobile is to (?)  
1 a carriage, 2 electricity, 3 a tire, 4 speed, 5 glow..... ( )
15. If a boy can run at the rate of 6 feet in  $\frac{1}{4}$  of a second, how many feet can he run in 10 seconds? ( )
16. A meal always involves (?)  
1 a table, 2 dishes, 3 hunger, 4 food, 5 water..... ( )
17. Of the five words below, four are alike in a certain way. Which is the one not like these four?  
1 bend, 2 shave, 3 chop, 4 whittle, 5 shear..... ( )
18. The opposite of never is (?)  
1 often, 2 sometimes, 3 occasionally, 4 always, 5 frequently..... ( )
19. A clock is related to time as a thermometer is to (?)  
1 a watch, 2 warm, 3 a bulb, 4 mercury, 5 temperature..... ( )
20. Which word makes the truest sentence? Men are (?) shorter than their wives.  
1 always, 2 usually, 3 much, 4 rarely, 5 never..... ( )
21. One number is wrong in the following series. What should that number be?  
1 4 2 5 3 6 4 7 5 9 6 9..... ( )
22. If the first two statements following are true, the third is (?) All members of this club are Republicans. Smith is not a Republican. Smith is a member of this club.  
1 true, 2 false, 3 not certain..... ( )
23. A contest always has (?)  
1 an umpire, 2 opponents, 3 spectators, 4 applause, 5 victory..... ( )
24. Which number in this series appears a second time nearest the beginning?  
6 4 5 3 7 8 0 9 5 9 8 8 6 5 4 7 3 0 8 9 1..... ( )
25. The moon is related to the earth as the earth is to (?)  
1 Mars, 2 the sun, 3 clouds, 4 stars, 5 the universe..... ( )
26. Which word makes the truest sentence? Fathers are (?) wiser than their sons.  
1 always, 2 usually, 3 much, 4 rarely, 5 never..... ( )



27. The opposite of awkward is (?)  
 1 strong, 2 pretty, 3 short, 4 graceful, 5 swift..... ( )
28. A mother is always (?) than her daughter.  
 1 wiser, 2 taller, 3 stouter, 4 older, 5 more wrinkled..... ( )
29. Which one of the six statements below tells the meaning of the following proverb? "The burnt child dreads the fire." ..... ( )
1. Frivolity flourishes when authority is absent.
  2. Unhappy experiences teach us to be careful.
  3. A thing must be tried before we know its value.
  4. A meal is judged by the dessert.
  5. Small animals never play in the presence of large ones.
  6. Children suffer more from heat than grown people.
30. Which statement above explains this proverb? "When the cat is away, the mice will play." ( )
31. Which statement above explains this proverb? "The proof of the pudding is in the eating." ( )
32. If the settlement of a difference is made by mutual concession, it is called a (?)  
 1 promise, 2 compromise, 3 injunction, 4 coercion, 5 restoration..... ( )
33. What is related to disease as carefulness is to accident?  
 1 doctor, 2 surgery, 3 medicine, 4 hospital, 5 sanitation..... ( )
34. Of the five things below, four are alike in a certain way. Which is the one not like these four?  
 1 smuggle, 2 steal, 3 bribe, 4 cheat, 5 sell..... ( )
35. If 10 boxes full of apples weigh 400 pounds, and each box when empty weighs 4 pounds, how many pounds do all the apples weigh? ..... ( )
36. The opposite of hope is (?)  
 1 faith, 2 misery, 3 sorrow, 4 despair, 5 hate..... ( )
37. If all the odd-numbered letters in the alphabet were crossed out, what would be the tenth letter not crossed out? Print it. *Do not mark the alphabet.*  
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z..... ( )
38. What letter in the word SUPERFLUOUS is the same number in the word (counting from the beginning) as it is in the alphabet? Print it..... ( )
39. What people say about a person constitutes his (?)  
 1 character, 2 gossip, 3 reputation, 4 disposition, 5 personality..... ( )
40. If  $2\frac{1}{2}$  yards of cloth cost 30 cents, how many cents will 10 yards cost?..... ( )
41. If the words below were arranged to make a good sentence, with what letter would the second word of the sentence begin? Make it like a printed capital.  
 same means big large the as..... ( )
42. If the first two statements following are true, the third is (?) George is older than Frank. James is older than George. Frank is younger than James.  
 1 true, 2 false, 3 not certain..... ( )
43. Suppose the first and second letters in the word CONSTITUTIONAL were interchanged, also the third and fourth letters, the fifth and sixth, etc. Print the letter that would then be the twelfth letter counting to the right..... ( )
44. One number is wrong in the following series. What should that number be?  
 0 1 3 6 10 15 21 28 34..... ( )
45. If  $4\frac{1}{2}$  yards of cloth cost 90 cents, how many cents will  $2\frac{1}{2}$  yards cost?..... ( )
46. A man's influence in a community should depend upon his (?)  
 1 wealth, 2 dignity, 3 wisdom, 4 ambition, 5 political power..... ( )
47. What is related to few as ordinary is to exceptional?  
 1 none, 2 some, 3 many, 4 less, 5 more..... ( )
48. The opposite of treacherous is (?)  
 1 friendly, 2 brave, 3 wise, 4 cowardly, 5 loyal..... ( )
49. Which one of the five words below is most unlike the other four?  
 1 good, 2 large, 3 red, 4 walk, 5 thick..... ( )
50. If the first two statements following are true, the third is (?) Some of Brown's friends are Baptists. Some of Brown's friends are dentists. Some of Brown's friends are Baptist dentists.  
 1 true, 2 false, 3 not certain..... ( )
51. How many of the following words can be made from the letters in the word LARGEST, using any letter any number of times?  
 great, stagger, grasses, trestle, struggle, rattle, garage, strangle..... ( )
52. The statement that the moon is made of green cheese is (?)  
 1 absurd, 2 misleading, 3 improbable, 4 unfair, 5 wicked..... ( )



53. Of the five things following, four are alike in a certain way. Which is the one not like these four?  
1 tar, 2 snow, 3 soot, 4 ebony, 5 coal..... ( )
54. What is related to a cube in the same way in which a circle is related to a square?  
1 circumference, 2 sphere, 3 corners, 4 solid, 5 thickness..... ( )
55. If the following words were seen on a wall by looking in a mirror on an opposite wall, which word would appear exactly the same as if seen directly?  
1 OHIO, 2 SAW, 3 NOON, 4 MOTOR, 5 OTTO..... ( )
56. If a strip of cloth 24 inches long will shrink to 22 inches when washed, how many inches long will a 36-inch strip be after shrinking?..... ( )
57. Which of the following is a trait of character?  
1 personality, 2 esteem, 3 love, 4 generosity, 5 health..... ( )
58. Find the two letters in the word DOING which have just as many letters between them in the word as in the alphabet. Print the one of these letters that comes first in the alphabet.  
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z..... ( )
59. Revolution is related to evolution as flying is to (?)  
1 birds, 2 whirling, 3 walking, 4 wings, 5 standing..... ( )
60. One number is wrong in the following series. What should that number be?  
1 3 9 27 81 108..... ( )
61. If Frank can ride a bicycle 30 feet while George runs 20 feet, how many feet can Frank ride while George runs 30 feet?..... ( )
62. Count each N in this series that is followed by an O next to it if the O is not followed by a T next to it. Tell how many N's you count.  
N O N T Q M N O T M O N O O N Q M N N O Q N O T O N A M O N O M..... ( )
63. A man who is averse to change and progress is said to be (?)  
1 democratic, 2 radical, 3 conservative, 4 anarchistic, 5 liberal..... ( )
64. Print the letter which is the fourth letter to the left of the letter which is midway between O and S in the alphabet..... ( )
65. What number is in the space which is in the rectangle and in the triangle but not in the circle? ( )



66. What number is in the same geometrical figure or figures as the number 8?..... ( )
67. How many spaces are there that are in any two but only two geometrical figures?..... ( )
68. A surface is related to a line as a line is to (?)  
1 solid, 2 plane, 3 curve, 4 point, 5 string..... ( )
69. If the first two statements following are true, the third is (?) One cannot become a good violinist without much practice. Charles practices much on the violin. Charles will become a good violinist.  
1 true, 2 false, 3 not certain..... ( )
70. If the words below were arranged to make the best sentence, with what letter would the last word of the sentence end? Print the letter as a capital.  
sincerity traits courtesy character of desirable and are..... ( )
71. A man who is influenced in making a decision by preconceived opinions is said to be (?)  
1 influential, 2 prejudiced, 3 hypocritical, 4 decisive, 5 impartial..... ( )
72. A hotel serves a mixture of 2 parts cream and 3 parts milk. How many pints of cream will it take to make 15 pints of the mixture?..... ( )
73. What is related to blood as physics is to motion?  
1 temperature, 2 veins, 3 body, 4 physiology, 5 geography..... ( )
74. A statement the meaning of which is not definite is said to be (?)  
1 erroneous, 2 doubtful, 3 ambiguous, 4 distorted, 5 hypothetical..... ( )
75. If a wire 20 inches long is to be cut so that one piece is  $\frac{2}{3}$  as long as the other piece, how many inches long must the shorter piece be?..... ( )



# MINNESOTA VOCATIONAL TEST FOR CLERICAL WORKERS

(Arranged by Dorothy M. Andrew under the direction of Donald G. Paterson and Howard P. Longstaff)

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Name \_\_\_\_\_ Date \_\_\_\_\_

## TEST 1—Number Comparison

Number Right \_\_\_\_\_

Number Wrong \_\_\_\_\_

Score = R—W \_\_\_\_\_

Percentile Rating \_\_\_\_\_

## TEST 2—Name Comparison

Number Right \_\_\_\_\_

Number Wrong \_\_\_\_\_

Score = R—W \_\_\_\_\_

Percentile Rating \_\_\_\_\_

### Instructions

On the inside pages there are two tests. One of the tests consists of pairs of names and the other of pairs of numbers. If the two names or the two numbers of a pair are *exactly the same* make a check mark (✓) on the line between them; if they are *different*, make no mark on that line. When the examiner says "Stop!" draw a line under the last pair at which you have looked.

*Samples done correctly of pairs of Numbers*

79542      79524

5794367    ✓    5794367

*Samples done correctly of pairs of Names*

John C. Linder      John C. Lender

Investors Syndicate    ✓    Investors Syndicate

*Now try the samples below.*

66273894      66273984

527384578      527384578

New York World      New York World

Cargill Grain Co.      Cargil Grain Co.

This is a test for Speed and Accuracy. Work as fast as you can without making mistakes.

Do not turn this page until you are told to begin.



# Test 1

✓ Check if the two numbers are the same.

- |     |              |              |      |              |              |
|-----|--------------|--------------|------|--------------|--------------|
| 1.  | 307          | 309          | 51.  | 5829         | 5820         |
| 2.  | 4605         | 4603         | 52.  | 192836472829 | 192836472829 |
| 3.  | 976          | 996          | 53.  | 362          | 362          |
| 4.  | 101267       | 101267       | 54.  | 2039271827   | 2039276837   |
| 5.  | 3065432      | 30965432     | 55.  | 73829        | 73829        |
| 6.  | 103345700    | 103345700    | 56.  | 82739102837  | 82739102837  |
| 7.  | 46754        | 466754       | 57.  | 48891028     | 48891028     |
| 8.  | 3367490      | 3367490      | 58.  | 7291728      | 7291928      |
| 9.  | 2779         | 2778         | 59.  | 172839102839 | 172839102839 |
| 10. | 57394        | 57394        | 60.  | 628192       | 628102       |
| 11. | 63801829374  | 63801839474  | 61.  | 473829432    | 473829432    |
| 12. | 283577657    | 283577657    | 62.  | 478          | 478          |
| 13. | 75689        | 75689        | 63.  | 372816253902 | 372816252902 |
| 14. | 2547892026   | 2547893026   | 64.  | 64829        | 64830        |
| 15. | 336354       | 336254       | 65.  | 4739210249   | 4739210249   |
| 16. | 998745732    | 998745733    | 66.  | 748362       | 748363       |
| 17. | 623          | 623          | 67.  | 728354792    | 728354772    |
| 18. | 263849102983 | 263849102983 | 68.  | 3927         | 3927         |
| 19. | 5870         | 5870         | 69.  | 927384625    | 927384625    |
| 20. | 379012       | 379012       | 70.  | 4628156      | 4628158      |
| 21. | 8734629      | 8734629      | 71.  | 6382         | 6392         |
| 22. | 2549806746   | 2549806746   | 72.  | 12937453829  | 12937453829  |
| 23. | 57802564     | 57892564     | 73.  | 523          | 533          |
| 24. | 689246       | 688246       | 74.  | 7263920      | 7263920      |
| 25. | 1578024683   | 1578024683   | 75.  | 74293        | 74293        |
| 26. | 582039485618 | 582039485618 | 76.  | 82734291     | 82734271     |
| 27. | 63829172630  | 63829172639  | 77.  | 2739102637   | 2739102637   |
| 28. | 592          | 592          | 78.  | 62810263849  | 62810263846  |
| 29. | 829374820    | 829374820    | 79.  | 638291       | 638291       |
| 30. | 62937456     | 63937456     | 80.  | 62831027     | 62831027     |
| 31. | 8293         | 8293         | 81.  | 527          | 529          |
| 32. | 6382910293   | 6382910292   | 82.  | 172438291026 | 172438291026 |
| 33. | 781928374012 | 781928374912 | 83.  | 7253829142   | 725382942    |
| 34. | 68293        | 68393        | 84.  | 836287       | 836289       |
| 35. | 18203649271  | 18293649271  | 85.  | 62435162839  | 62435162839  |
| 36. | 4820384      | 4820384      | 86.  | 6254         | 6256         |
| 37. | 283019283745 | 283019283745 | 87.  | 6241526      | 6241526      |
| 38. | 73927102     | 73927102     | 88.  | 1426389012   | 1426389102   |
| 39. | 91029354829  | 91029354829  | 89.  | 825          | 825          |
| 40. | 38291728     | 38291728     | 90.  | 67253917287  | 67253917287  |
| 41. | 6283910293   | 6283910203   | 91.  | 6271         | 6271         |
| 42. | 392018273648 | 392018273848 | 92.  | 263819253627 | 263819253629 |
| 43. | 820          | 829          | 93.  | 82637        | 82937        |
| 44. | 572937273    | 572937373    | 94.  | 728392736    | 728392736    |
| 45. | 7392         | 7392         | 95.  | 62739        | 62739        |
| 46. | 8172036      | 8172036      | 96.  | 728352689    | 728352688    |
| 47. | 68391028364  | 68391028394  | 97.  | 463728       | 463728       |
| 48. | 48293        | 48292        | 98.  | 73829176     | 73827196     |
| 49. | 739201       | 739201       | 99.  | 4825367      | 4825369      |
| 50. | 62839201     | 62839211     | 100. | 56382018     | 56382018     |



✓ Check if the two numbers are the same.

101.	789	789	151.	73526	73526
102.	819263728192	819263728172	152.	7283627189	7283627189
103.	682537289	682537298	153.	627	637
104.	7245	7245	154.	728352617283	728352617282
105.	82936542891	82936542891	155.	6281	6381
106.	4738267	4738277	156.	936271826	936371826
107.	63728	63729	157.	82637192037	82637192037
108.	6283628901	6283628991	158.	527182	527182
109.	918264	918264	159.	6273	6273
110.	263728192037	263728192073	160.	726354256	72635456
111.	52839102738	5283910238	161.	725361552637	725361555637
112.	6283	6282	162.	7526378	7526377
113.	7283529152	7283529152	163.	685	685
114.	208	298	164.	82637481028	82637481028
115.	82637201927	8263720127	165.	3427	3429
116.	15273826	15273826	166.	827364933251	827364933351
117.	72537	73537	167.	63728	63728
118.	726391027384	726391027384	168.	6273846273	6273846293
119.	627389	627399	169.	62836	6283
120.	725382910	725382910	170.	2638496	2638496
121.	46273	46273	171.	738291627874	738291627874
122.	629	620	172.	62836454	62836455
123.	7382517283	7382517283	173.	42738267	42738269
124.	637281	639281	174.	573829	573829
125.	2738261	2728261	175.	628364728	628364928
126.	627152637490	627152637490	176.	725	735
127.	73526189	73526189	177.	627385	627383
128.	5372	5392	178.	63354	63354
129.	63728142	63728124	179.	54283902	54283602
130.	4783946	4783046	180.	7283562781	7283562781
131.	82637281028	82637281028	181.	62738	63738
132.	628	628	182.	727355542321	72735542321
133.	7293728172	7293728177	183.	263849332	263849332
134.	7362	7362	184.	162837	163837
135.	927382615	927382615	185.	47382912	47382922
136.	85345	85345	186.	628367299	628367399
137.	895643278	895643277	187.	111	111
138.	726352	726353	188.	11829304829	11828304829
139.	7263524	7263524	189.	4448	4448
140.	632685	632685	190.	333693678	333693678
141.	273648293048	273648293048	191.	3212	3212
142.	634	634	192.	27389223678	27389223678
143.	7362536478	7362536478	193.	473829	473829
144.	7362	7363	194.	7382937	7383937
145.	7362819273	7362819273	195.	3628901223	3628901233
146.	63728	63738	196.	5572867	5572867
147.	63728192637	63728192639	197.	87263543	87263543
148.	728	738	198.	3678902	3678892
149.	62738291527	62738291529	199.	15672839	15672839
150.	63728192	63728192	200.	9927382	9927382



# Test 2

✓ Check if the two names are the same.

- |  |   |
|--|---|
| 1. Hulme Co.——Hulme Co.                            | 51. Armo Culvert Co.——Armo Culvert & Co.              |
| 2. L. T. Piver——L. T. Piver                        | 52. Larous & Bro.——Larus & Bro.                       |
| 3. Foley & Co.——Foley & Co.                        | 53. Winstar W. B.——Winstar W. B.                      |
| 4. Floyd Gibbons——Floyd Gibbons                    | 54. Bender L. C.——Binder L. C.                        |
| 5. Dole Publishing Co.——Dole Publishing Co.        | 55. J. C. Andresen Inc.——J. C. Andresen Inc.          |
| 6. Chase Bag Co.——Chase Bag Co.                    | 56. Vacuum Oil Company——Vacuum Oil Company            |
| 7. Aladdin Co.——Aladdin & Co.                      | 57. Endicott Co.——Endicott Co.                        |
| 8. Arthur Bier & Co.——Arthur Bier Co.              | 58. Minneapolis Mfg. Co.——Minneapolis Mfg. Co.        |
| 9. Mydall Cain——Mydell Cain                        | 59. Beverly A. B.——Beverley A. B.                     |
| 10. M. C. D. Borden & Sons——M. C. D. Borden & Sons | 60. Jensen & Co.——Jenson & Co.                        |
| 11. Midland Nat'l. Bank——Midland Nat'l. Bank       | 61. Meumann L. R.——Meumann L. R.                      |
| 12. Hixon Lt'd.——Hixon Lt'd.                       | 62. Stevenson & Co.——Stevenson & Co.                  |
| 13. R. Weiner——R. Wiener                           | 63. Haldoran H. P.——Haldoran H. P.                    |
| 14. Pacquerey——Pacqueris                           | 64. Evers Bros.——Evers Bros.                          |
| 15. Ponemah Mills——Ponemah Mills                   | 65. Nevens Sales Co.——Nevens Sale Co.                 |
| 16. Keeley Institute——Keeley's Institute           | 66. Outdoor Sign Co.——Outdoor Sign Co.                |
| 17. Jim Pepper——Jim Pepper                         | 67. Young & Co.——Young & Co.                          |
| 18. Pictorial Review——Pictorial Review             | 68. Goodyear Tire Co.——Goodyear Tire Co.              |
| 19. Colette Cartier——Colette Cartier               | 69. Redford Lb'r. Co.——Redford Lb'r. Co.              |
| 20. Mayno Salon——Mayno's Salon                     | 70. Canadian National——Canadian Nat'l.                |
| 21. Glazo Co.——Glazo Inc.                          | 71. Standard Oil Co.——Standard Oil Co.                |
| 22. Bonne Lee——Bonne & Lee                         | 72. Valiant Mfg. Co.——Valant Mfg. Co.                 |
| 23. Vapo Cresolene Co.——Vapo Cresolen Co.          | 73. C. Harris——C. Harris                              |
| 24. Wiebusch & Helger——Weibusch & Helger           | 74. J. Williams Company——G. Williams Company          |
| 25. A. M. Davis——A. M. Davis                       | 75. Kaufmann A. C.——Kaufman A. C.                     |
| 26. Foote Lb'r. Co.——Foot Lb'r. Co.                | 76. Frisby N. C.——Frisby N. C.                        |
| 27. Lander's——Lander's                             | 77. Donald T. C.——Donald T. C.                        |
| 28. Delle Ross——Dell Ross                          | 78. Waldo Inc.——Waldo Co.                             |
| 29. Savage Rug Co.——Savage Rug Co.                 | 79. Andres Mfg. Co.——Andres Mfg. Co.                  |
| 30. Landon & Warner——Landen & Warner               | 80. Oriza Ann Legrand——Oriza Anne Legrand             |
| 31. Dennison's——Dennison's                         | 81. A. Stein & Company——A. Stien & Company            |
| 32. Piggily Wiggily Co.——Piggily Wiggily Co.       | 82. Robert Courtney——Robert S. Courtney               |
| 33. Hurley Machine Co.——Hurly Machine Co.          | 83. Leonard Music Co.——Leonard Music Co.              |
| 34. J. Bauer & Black——J. Baeur & Black             | 84. George Morgan——George Morgen                      |
| 35. Edwin Cigar Co.——Edwin Cigar Co.               | 85. Paulson's Cafe——Paulson's Cafe                    |
| 36. Vik Oil Co.——Vik Oil Co.                       | 86. Robert T. Quamme——Robert T. Quame                 |
| 37. John Skinner & Sons——John Skinner & Son        | 87. Traverse Studio——Traverse Studio                  |
| 38. Eagle Pencil Co.——Eagle Pencil Co.             | 88. Upton Grain Co.——Upten Grain Co.                  |
| 39. Hudson Bros.——Hudson Bros.                     | 89. E. E. Atkinson——E. E. Atkinson                    |
| 40. D. M. Ferry & Co.——D. M. Ferry Co.             | 90. Zeisler Furrier——Ziesler Furrier                  |
| 41. Johnsen A. J.——Johnson A. J.                   | 91. E. G. Kenyon——E. G. Kenyon                        |
| 42. Todd & Son——Todd & Sons                        | 92. Backus, Roy——Backus, Ray                          |
| 43. Merrill Palmer——Merrill Palmer                 | 93. Carpenter Steel Co.——Carpenter Steel Co.          |
| 44. T. Cook & Son——T. Cook & Son                   | 94. W. E. Davenport——W. E. Davanport                  |
| 45. Funk & Wagnall——Funk & Wagnull                 | 95. John Kingsley——John G. Kingsley                   |
| 46. F. H. Vizetelly——F. H. Vizitelly               | 96. Lane Inc.——Lane Inc.                              |
| 47. Higgen & Co.——Higgin & Co.                     | 97. T. G. Lentingworth——T. G. Lentinworth             |
| 48. Bert Cooksley——Bert Cooksley                   | 98. Elizabeth Bennett——Elizabeth Bennett              |
| 49. W. C. Wadsworth Co.——W. C. Wadworth Co.        | 99. Charibel——Claribel                                |
| 50. Alvah Bushnell——Alvah Bushnell                 | 100. R. C. A. Victor Company——R. C. A. Victor Company |



✓ Check if the two names are the same.

101.	Crane Ltd.—Crane Co.	151.	H. J. Heinz—H. J. Hienz
102.	Isaac F. Marcossan—Isaac F. Marcoson	152.	National City Co.—National City Co.
103.	Stromberg Carlson—Stromberg Carlsen	153.	Dorothy Gray—Dorothy Gray
104.	W. A. Evans—W. A. Evans	154.	Reinhard Brothers—Reinhart Brothers
105.	Mason Tile Co.—Matson Tile Co.	155.	Oscar Bye—Oscar Bye
106.	Clark Frame Co.—Clark Frame Co.	156.	Ben Coal Co.—Ben Coal Co.
107.	William G. Kellogg—William P. Kellogg	157.	C. Lundstrom Mfg. Co.—C. Lundstrom Mfg. Co.
108.	Berwind Briquets—Berwind Briquets	158.	J. C. McKesson Drug Co.—J. C. MacKesson Drug Co.
109.	F. W. Bronson—F. W. Bronson	159.	Waite Coal Co.—Wait Coal Co.
110.	Nash Motors—Nash Motor	160.	Berry Brothers—Berry Brothers
111.	C. E. Locke—C. E. Lock	161.	J. Coty Co.—J. Coty Co.
112.	Mazer Cressman Co.—Mazer Cressmon Co.	162.	F. R. Connell—F. R. Connell
113.	Leslie Thrasher—Leslie Thrasher	163.	Dr. Miles Company—Dr. Mills Company
114.	Plough Inc.—Plough Lt'd.	164.	Northam Warrer—Northam Warren
115.	Walpole—Wallpole	165.	Indian Refining Co.—Indian Refining Co.
116.	John Hergesheim—John Hergesheimer	166.	Jack Richard—Jack Richard
117.	Hudson Bay & Co. Ltd.—Hudson Bay Co. Ltd.	167.	Kirsch Mfg. Co.—Kiresch Mfg. Co.
118.	Lassco Co.—Lassko Co.	168.	Jack Wachter—Jack Wachter
119.	Albert Mills—Albert Mill	169.	C. M. Stend—C. M. Stent
120.	Yale Stores—Yale Store	170.	John Blassingham—John Blassingham
121.	Bob Fairbanks—Bob Fairbanks	171.	W. W. Brock—W. W. Brock
122.	Denton Products—Denten Products	172.	L. Waterman Company—L. Watermon Company
123.	Wells Dickey Co.—Wells Dickey Inc.	173.	F. H. Weaver—F. P. Weaver
124.	S. N. Jonas—S. N. Jonus	174.	Multistamp Co., Inc.—Multistamp Co., Inc.
125.	Warren Co.—Warren Co.	175.	Sani-flush—Sani-flush
126.	Kelly Transfer—Kelly Transfer	176.	Tung Sol Lamp Inc.—Tung Sul Lamp Inc.
127.	S. Karpen & Brothers—S. Karpen & Brothers	177.	F. J. Suderman—F. J. Suderman
128.	A. J. Drexel—A. J. Drexel	178.	Theo. Audel & Co.—Theo. Audel Co.
129.	C. H. Salmon—S. H. Salmon	179.	Cox Realtors—Cox Realtors
130.	H. Simons Lbr. Co.—H. Simons Lbr. Co.	180.	Kellogg Company—Kellogg Company
131.	Villaume Lbr. Co.—Villaum Lbr. Co.	181.	Ann Lowe—Anna Lowe
132.	Banett Company—Banett Company	182.	A. Cederstrand & Son—A. Cedarstrand & Son
133.	B. B. Quinn—B. B. Quinn	183.	Marschke Co.—Marsckhe Co.
134.	Beauville Co.—Beauxville Co.	184.	Collum & Ackerman—Collum & Ackerman
135.	Gordon Mfg. Co.—Gordon Mfg. Co.	185.	Insulite Co.—Insulite Co.
136.	Curtis Mill Co.—Curtis Mill Co.	186.	General Steel Co.—General Steel Co.
137.	S. Jacobs & Company—S. Jacobs & Company	187.	Charles Von Buelow—Charles Von Beulow
138.	W. Morton—W. Morten	188.	A. D. Beaudette—A. D. Beaudette
139.	F. D. Prescott—F. D. Prescott	189.	Firestone Tire Co.—Firestone Tire Co.
140.	Old Gold—Old Gold	190.	Foxsworth & Son—Foxsworth & Son
141.	Jones Inc.—Jones Bros.	191.	A. S. Hinds Co.—A. S. Hinds Co.
142.	Petropalm & Son Inc.—Petropalm & Son Inc.	192.	Charles Beardslee—Charles Beardslee
143.	Palmers Ltd.—Palmers Ltd.	193.	Axton Tobacco Co.—Axeton Tobacco Co.
144.	Higgin Mfg. Co.—Higgen Mfg. Co.	194.	Inso Board Co.—Inso Board Co.
145.	Lehigh Coal Sales—Lehigh Coal Sales	195.	Stanley Russell—Stanley Russell
146.	Buick Motor Co.—Buick Motors Co.	196.	Babson Mfg. Co.—Babsen Mfg. Co.
147.	George Carpenter—George Carpentier	197.	Bodee Institute—Bodee Institute
148.	H. H. Hemenway—H. H. Hememway	198.	Greer College—Greer College
149.	M. A. Gladding—M. A. Gladding	199.	Lampland Lbr. Co.—Lamplund Lbr. Co.
150.	F. J. Cheney & Co.—F. J. Cheney & Co.	200.	Bird & Son Inc.—Bird & Sons Inc.













# THE PERSONALITY INVENTORY

By ROBERT G. BERNREUTER

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Date.....

NAME..... Age..... Sex.....

Address.....

Name of school  
or business firm..... School grade  
or occupation .....

	B1-N	B2-S	B3-I	B4-D	F1-C	F2-S
Plus						
Minus						
Difference						
Percentile	%	%	%	%	%	%

H.S.—COLL.—ADULT

Based on

norms

MALE—FEMALE

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Leland Stanford Junior University

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The questions on this blank are intended to indicate your interests and attitudes. It is not an intelligence test, nor are there any right or wrong answers.

In front of each question you will find: "Yes No ?"

If your answer is "Yes," draw a circle around the "Yes." If your answer is "No," draw a circle around the "No." If you are entirely unable to answer either "Yes" or "No" to the question, then draw a circle around the question mark.

- 
1. Yes No ? Does it make you uncomfortable to be "different" or unconventional?
  2. Yes No ? Do you day-dream frequently?
  3. Yes No ? Do you usually work things out for yourself rather than get someone to show you?
  4. Yes No ? Have you ever crossed the street to avoid meeting some person?
  5. Yes No ? Can you stand criticism without feeling hurt?
  6. Yes No ? Do you ever give money to beggars?
  7. Yes No ? Do you prefer to associate with people who are younger than yourself?
  8. Yes No ? Do you often feel just miserable?
  9. Yes No ? Do you dislike finding your way about in strange places?
  10. Yes No ? Are you easily discouraged when the opinions of others differ from your own?
  11. Yes No ? Do you try to get your own way even if you have to fight for it?
  12. Yes No ? Do you blush very often?
  13. Yes No ? Do athletics interest you more than intellectual affairs?
  14. Yes No ? Do you consider yourself a rather nervous person?
  15. Yes No ? Do you usually object when a person steps in front of you in a line of people?
  16. Yes No ? Have you ever tried to argue or bluff your way past a guard or doorman?
  17. Yes No ? Are you much affected by the praise or blame of many people?
  18. Yes No ? Are you touchy on various subjects?
  19. Yes No ? Do you frequently argue over prices with tradesmen or junkmen?
  20. Yes No ? Do you feel self-conscious in the presence of superiors in the academic or business world?
  21. Yes No ? Do ideas often run through your head so that you cannot sleep?
  22. Yes No ? Are you slow in making decisions?
  23. Yes No ? Do you think you could become so absorbed in creative work that you would not notice a lack of intimate friends?
  24. Yes No ? Are you troubled with shyness?
  25. Yes No ? Are you inclined to study the motives of other people carefully?
  26. Yes No ? Do you frequently feel grouchy?
  27. Yes No ? Do your interests change rapidly?
  28. Yes No ? Are you very talkative at social gatherings?
  29. Yes No ? Do you ever heckle or question a public speaker?
  30. Yes No ? Do you very much mind taking back articles you have purchased at stores?
  31. Yes No ? Do you see more fun or humor in things when you are in a group than when alone?
  32. Yes No ? Do you prefer travelling with someone who will make all the necessary arrangements to the adventure of travelling alone?
  33. Yes No ? Would you rather work for yourself than carry out the program of a superior whom you respect?
  34. Yes No ? Can you usually express yourself better in speech than in writing?
  35. Yes No ? Would you dislike any work which might take you into isolation for a few years, such as forest ranging, etc.?
  36. Yes No ? Have you ever solicited funds for a cause in which you were interested?
  37. Yes No ? Do you usually try to avoid dictatorial or "bossy" people?
  38. Yes No ? Do you find conversation more helpful in formulating your ideas than reading?



39. Yes No ? Do you worry too long over humiliating experiences?
40. Yes No ? Have you ever organized any clubs, teams, or other groups on your own initiative?
41. Yes No ? If you see an accident do you quickly take an active part in giving aid?
42. Yes No ? Do you get stage fright?
43. Yes No ? Do you like to bear responsibilities alone?
44. Yes No ? Have books been more entertaining to you than companions?
45. Yes No ? Have you ever had spells of dizziness?
46. Yes No ? Do jeers humiliate you even when you know you are right?
47. Yes No ? Do you want someone to be with you when you receive bad news?
48. Yes No ? Does it bother you to have people watch you at work even when you do it well?
49. Yes No ? Do you often experience periods of loneliness?
50. Yes No ? Do you usually try to avoid arguments?
51. Yes No ? Are your feelings easily hurt?
52. Yes No ? Do you usually prefer to do your own planning alone rather than with others?
53. Yes No ? Do you find that telling others of your own personal good news is the greatest part of the enjoyment of it?
54. Yes No ? Do you often feel lonesome when you are with other people?
55. Yes No ? Are you thrifty and careful about making loans?
56. Yes No ? Are you careful not to say things to hurt other people's feelings?
57. Yes No ? Are you easily moved to tears?
58. Yes No ? Do you ever complain to the waiter when you are served inferior or poorly prepared food?
59. Yes No ? Do you find it difficult to speak in public?
60. Yes No ? Do you ever rewrite your letters before mailing them?
61. Yes No ? Do you usually enjoy spending an evening alone?
62. Yes No ? Do you make new friends easily?
63. Yes No ? If you are dining out do you prefer to have someone else order dinner for you?
64. Yes No ? Do you usually feel a great deal of hesitancy over borrowing an article from an acquaintance?
65. Yes No ? Are you greatly embarrassed if you have greeted a stranger whom you have mistaken for an acquaintance?
66. Yes No ? Do you find it difficult to get rid of a salesman?
67. Yes No ? Do people ever come to you for advice?
68. Yes No ? Do you usually ignore the feelings of others when accomplishing some end which is important to you?
69. Yes No ? Do you often find that you cannot make up your mind until the time for action has passed?
70. Yes No ? Do you especially like to have attention from acquaintances when you are ill?
71. Yes No ? Do you experience many pleasant or unpleasant moods?
72. Yes No ? Are you troubled with feelings of inferiority?
73. Yes No ? Does some particularly useless thought keep coming into your mind to bother you?
74. Yes No ? Do you ever upbraid a workman who fails to have your work done on time?
75. Yes No ? Are you able to play your best in a game or contest against an opponent who is greatly superior to you?
76. Yes No ? Have you frequently appeared as a lecturer or entertainer before groups of people?
77. Yes No ? Are people sometimes successful in taking advantage of you?
78. Yes No ? When you are in low spirits do you try to find someone to cheer you up?
79. Yes No ? Can you usually understand a problem better by studying it out alone than by discussing it with others?
80. Yes No ? Do you lack self-confidence?
81. Yes No ? Does admiration gratify you more than achievement?
82. Yes No ? Are you willing to take a chance alone in a situation of doubtful outcome?
83. Yes No ? Does your ambition need occasional stimulation through contact with successful people?



84. Yes No ? Do you usually avoid asking advice?
85. Yes No ? Do you consider the observance of social customs and manners an essential aspect of life?
86. Yes No ? If you are spending an evening in the company of other people do you usually let someone else decide upon the entertainment?
87. Yes No ? Do you take the responsibility for introducing people at a party?
88. Yes No ? If you came late to a meeting would you rather stand than take a front seat?
89. Yes No ? Do you like to get many views from others before making an important decision?
90. Yes No ? Do you try to treat a domineering person the same as he treats you?
91. Yes No ? Does your mind often wander so badly that you lose track of what you are doing?
92. Yes No ? Do you ever argue a point with an older person whom you respect?
93. Yes No ? Do you have difficulty in making up your mind for yourself?
94. Yes No ? Do you ever take the lead to enliven a dull party?
95. Yes No ? Would you "have it out" with a person who spread untrue rumors about you?
96. Yes No ? At a reception or tea do you feel reluctant to meet the most important person present?
97. Yes No ? Do you find that people are more stimulating to you than anything else?
98. Yes No ? Do you prefer a play to a dance?
99. Yes No ? Do you tend to be radical in your political, religious, or social beliefs?
100. Yes No ? Do you prefer to be alone at times of emotional stress?
101. Yes No ? Do you usually prefer to work with others?
102. Yes No ? Do you usually work better when you are praised?
103. Yes No ? Do you have difficulty in starting a conversation with a stranger?
104. Yes No ? Do your feelings alternate between happiness and sadness without apparent reason?
105. Yes No ? Are you systematic in caring for your personal property?
106. Yes No ? Do you worry over possible misfortunes?
107. Yes No ? Do you usually prefer to keep your feelings to yourself?
108. Yes No ? Can you stick to a tiresome task for a long time without someone prodding or encouraging you?
109. Yes No ? Do you get as many ideas at the time of reading a book as you do from a discussion of it afterward?
110. Yes No ? Do you usually face your troubles alone without seeking help?
111. Yes No ? Have you been the recognized leader (president, captain, chairman) of a group within the last five years?
112. Yes No ? Do you prefer making hurried decisions alone?
113. Yes No ? If you were hiking with a group of people, where none of you knew the way, would you probably let someone else take the full responsibility for guiding the party?
114. Yes No ? Are you troubled with the idea that people on the street are watching you?
115. Yes No ? Are you often in a state of excitement?
116. Yes No ? Are you considered to be critical of other people?
117. Yes No ? Do you usually try to take added responsibilities on yourself?
118. Yes No ? Do you keep in the background at social functions?
119. Yes No ? Do you greatly dislike being told how you should do things?
120. Yes No ? Do you feel that marriage is essential to your present or future happiness?
121. Yes No ? Do you like to be with people a great deal?
122. Yes No ? Can you be optimistic when others about you are greatly depressed?
123. Yes No ? Does discipline make you discontented?
124. Yes No ? Are you usually considered to be indifferent to the opposite sex?
125. Yes No ? Would you feel very self-conscious if you had to volunteer an idea to start a discussion among a group of people?



# BYRD HEALTH ATTITUDE SCALE

By OLIVER E. BYRD, Ed.D.

Associate Professor of Hygiene and Physical Education  
Stanford University, California

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The following scale is not a test of your knowledge. It is meant to measure your attitude toward certain health practices, both desirable and undesirable. There is no penalty for "wrong" answers, as the scale is not to be used for grading purposes. Please be frank and honest in giving your reactions to the health statements on the following pages.

Name..... Age..... Sex.....

School or college (now attending).....

City..... State.....

In what grade (or year) of school or college are you now enrolled?.....

Your father's occupation?.....

Your church or religious affiliation?.....

Were you born in the United States?.....

Were your parents born in the United States: father?..... mother?.....



## DIRECTIONS

READ EACH ITEM CAREFULLY AND *AT ONCE* UNDERLINE YOUR REACTION TO THE STATEMENT. Please work rapidly. Indicate the way you honestly *feel* about each statement. BE SURE TO ANSWER EVERY ITEM.

1. A person should be entirely responsible for his own health.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
2. The government should require all people to be insured for sickness.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
3. The health department should leave all health matters to the local doctors.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
4. All persons with tuberculosis should be registered with the public health department.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
5. Free clinics for the treatment of cancer should be closed.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
6. The United States should co-operate with all nations of the world in controlling disease.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
7. Working mothers should return to work within three weeks after the birth of a child.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
8. In the larger cities there should be health museums for health education of the public.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
9. A worker should lose his wages when he is sick.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
10. The water in public swimming pools should be sterilized.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
11. A person should smoke more than twenty cigarettes a day if he wants to do so.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
12. A person should go to the toilet for a bowel movement at about the same time each day.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
13. Children should be allowed to stay up as late as they please.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
14. People should be vaccinated for smallpox about every seven years.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
15. Children should be allowed to attend the "second" (late) show.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>



16. A beginning driver should go through a probation period before getting a driver's license.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
17. A pregnant woman should drink alcohol if she so desires.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
18. A person should go to the dentist about once every six months.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
19. There should be no health examination unless a person is sick.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
20. A person should have a regular hour for going to bed.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
21. People who are going to get married should do so without having a health examination.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
22. A person who is extremely hard of hearing should wear one of the newer hearing devices.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
23. Health articles in magazines should always be considered safe health information.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
24. The law should require all dishes in restaurants and soda fountains to be washed in a powerful antiseptic solution.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
25. Raw milk should be served in restaurants and soda fountains.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
26. There should be marriage bureaus to give advice to those who are married.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
27. A person who has been cured of cancer should let nobody know this fact.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
28. There should be more training or education for marriage.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
29. Diseased adenoids should be left undisturbed.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
30. The fire department should inspect homes for fire hazards.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
31. The school should have nothing to do with the health of students.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
32. The schools should teach what foods ought to be eaten.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>



33. There should be no school doctors.

Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>

34. Teachers should be taught to know the signs of communicable diseases.

Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>

35. The school should have no right to give a child a medical examination.

Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>

36. Teachers should be tested for tuberculosis before being employed.

Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>

37. Workers in restaurants and soda fountains should be employed without regard to their training in sanitation.

Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>

38. Airplanes arriving from foreign countries should be quarantined until inspected and sprayed for insects.

Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>

39. The health program of the schools should be limited to that of supplying clean rooms for the pupils.

Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>

40. The schools should increase their medical services to children.

Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>

41. Families should employ kitchen help without insisting on a medical examination.

Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>

42. After any serious illness a person should have his heart examined.

Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>

43. Families should employ nursemaids without insisting that they have a health examination.

Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>

44. Extreme shortness of breath should lead a person to have a medical examination.

Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>

45. A person should try to cure cancer by dieting (changing his eating habits).

Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>

46. School children should be tested for tuberculosis.

Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>

47. Child labor should be permitted by law.

Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>

48. Any persistent pain should cause a person to have a medical examination.

Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>

49. A pregnant woman should smoke tobacco if she so desires.

Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>



50. The public should be educated to a better selection of food.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
51. A person should return to work immediately after a serious illness.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
52. The public health department should be consulted in any housing program that calls for slum clearance.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
53. A man should be hired for a job without being forced to have a medical examination.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
54. Employers should have a recreation program for their workers.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
55. Compulsory physical education in the schools should be abolished.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
56. Some form of financial assistance should be given to families in which there is tuberculosis.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
57. The schools should make no recommendations to the parents about the health of their children.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
58. Picnic grounds should be supervised by the public health department.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
59. The teacher should pay no attention to the health of the student.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
60. Schools should give instruction in sex hygiene.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
61. A driver should be allowed to pass another automobile going in the same direction up a hill.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
62. Homes should have fire extinguishers ready for use.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
63. A person with mental peculiarities should be examined by a psychiatrist.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
64. The peddler of narcotic drugs should be given a jail sentence.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
65. The urine should be examined at least once a year.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
66. Doctors should wash the eyes of a newly born baby with a solution to destroy germs.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>



67. A baby should have a health examination in its first week of life.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
68. A person who has continued indigestion should have a medical examination.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
69. A person should examine the exhaust system of his automobile occasionally to see if it has a leak.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
70. A person should investigate things that make him afraid.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
71. A person past fifty years of age needs no health examinations as a regular procedure.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
72. There should be a law to make everyone get vaccinated against smallpox.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
73. Boys should smoke if they want to do so.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
74. People should be vaccinated for protection against as many diseases as possible.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
75. A person who has been drinking alcohol should drive an automobile if he wants to do so.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
76. A person with a "cold" should go to bed at once.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
77. Children should be allowed to play with fireworks.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
78. A bottle of milk should be washed before the top is removed and the milk poured.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
79. A person with a "cold" should stay away from the doctor.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
80. All members of the family should have regular medical examinations even if they are not sick.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
81. A person should cure himself without going to any kind of a doctor.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>
82. State laws should provide that cancer be reported to the public health authorities.  
Strongly agree<sup>5</sup>   Agree<sup>4</sup>   Undecided<sup>3</sup>   Disagree<sup>2</sup>   Strongly disagree<sup>1</sup>
83. A laborer should be allowed to work under high pressures (as in deep-sea diving) as long as he wishes.  
Strongly agree<sup>1</sup>   Agree<sup>2</sup>   Undecided<sup>3</sup>   Disagree<sup>4</sup>   Strongly disagree<sup>5</sup>



84. A medical adviser should be allowed to practice medicine only if he has a state license.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
85. A person should sometimes consult a medical adviser who advertises.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
86. A drunken driver should have his license permanently taken away.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
87. A child with its first set of teeth should be kept away from the dentist.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
88. The law should prohibit advertisements of "cancer cures."  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
89. Only children should have regular dental examinations.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
90. A complete medical examination should be a requirement for obtaining a driver's license.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
91. About the age of sixteen a person should have a health examination, with special attention to any signs of tuberculosis.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
92. A person should have a health examination at least once a year.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
93. Babies under one year of age should be fed raw milk if the mothers cannot nurse them.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
94. Schools should furnish free lunches to needy and undernourished students.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
95. Mental hospitals should be called insane asylums.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
96. Everybody should be tested for tuberculosis.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
97. It should be against the law to put sugar in an open container in restaurants or fountains.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
98. A smoker of tobacco should use some form of filter.  
Strongly agree<sup>5</sup> Agree<sup>4</sup> Undecided<sup>3</sup> Disagree<sup>2</sup> Strongly disagree<sup>1</sup>
99. Health agencies should work independently of each other.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>
100. Criminals should be allowed to drive automobiles.  
Strongly agree<sup>1</sup> Agree<sup>2</sup> Undecided<sup>3</sup> Disagree<sup>4</sup> Strongly disagree<sup>5</sup>



84. A medical adviser should be allowed to give advice only if he has a valid license.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

85. A person should continue to work if he is advised to do so by a physician.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

86. A person should not have his hands permanently tattooed.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

87. A child with his feet out of reach should be kept away from the family.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

88. The law should prohibit advertisements of "adult stores."

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

89. Only children should have regular dental examinations.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

90. A complete medical examination should be a requirement for obtaining a driver's license.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

91. About the age of sixteen a person should have a health examination, with special attention to

any signs of tuberculosis.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

92. A person should have a health examination at least once a year.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

93. Before using one year of age should be the first time a child is taken to a doctor.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

94. Schools should furnish first aid kits to teachers and students.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

95. Mental hospitals should be closed in many instances.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

96. Everybody should be tested for tuberculosis.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

97. It should be against the law to put sugar in food containers or restaurants.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

98. A smoker at tobacco should pay some form of tax.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

99. Health agencies should work independently of each other.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree

100. Criminals should be allowed to drive automobiles.

Strongly agree, Agree, Indifferent, Disagree, Strongly disagree



# Judgments Characteristic of

## THE SOCIALLY COMPETENT PERSON

### FORM A

BY PAUL R. MORT, RALPH B. SPENCE, V. C. ARNSPIGER, LAURA K. EADS

Name..... Grade (Encircle one) 7, 8, 9, 10, 11, 12  
 School..... City..... Date of birth..... Age last birthday .....

Judgments Characteristic of the Competent Pupil in	GRADE SCORE	GRADE	6-0	7-0	8-0	9-0	10-0	11-0	12-0	13-0
I. Health	<input style="width: 40px; height: 20px;" type="text"/>									
II. Personal Economics	<input style="width: 40px; height: 20px;" type="text"/>									
III. Family and Community Relationships	<input style="width: 40px; height: 20px;" type="text"/>									
IV. Social-Civic Problems	<input style="width: 40px; height: 20px;" type="text"/>									
Median Score	<input style="width: 40px; height: 20px;" type="text"/>									

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## Directions

A number of situations or problems which face high school boys and girls are given in the following pages. Following each of these are several statements. Carefully consider each situation or problem and then decide whether you agree or whether you disagree with each of the statements. Not all the statements are entirely true or entirely false under the conditions stated. In such cases you must judge whether, on the whole, the statement is more likely to be true or more likely to be false. For example, you will agree with the statement that *Men are taller than twelve-year-old boys* even though some twelve-year-old boys are taller than some men. If you agree with a statement place a circle around the *A (Agree)* as in number 1 in the sample below. If you disagree with a statement place a circle around the *D (Disagree)* as in number 2 in the sample below.

Sample:

- |   |          |
|---|----------|
| 1. One should cover his mouth and nose when sneezing. | 1. (A) D |
| 2. All high school boys and girls are healthy.        | 2. A (D) |



## Test I. Health Competence

Sample:

1. One should cover his mouth and nose when sneezing. 1. (A) D
2. All high school boys and girls are healthy. 2. A (D)

Time: 20 min.

I.

Robert is afraid of thunderstorms. The following are sensible ways for boys like Robert to behave in order to overcome such a fear:

1. Stay indoors and hide during all thunderstorms so they can outgrow their fears. 1. A (D)
2. Find out all they can about thunderstorms—their cause and ways of protection against them. 2. (A) D
3. Watch and discuss thunderstorms with persons who enjoy them. 3. A (D) X
4. Carry good luck charms with them wherever they go. 4. A (D)
5. Find out from a fortune teller whether or not they are likely to get struck by lightning. 5. A (D)

II.

High school boys and girls should plan their after-school hours wisely. Here are some sensible things that they might do.

6. Study daily from five to six hours after school on school days. 6. A (D)
7. Have outdoor recreation or sports every day. 7. (A) D
8. Include reading, as well as physical activities, in recreation time. 8. (A) D
9. Carefully plan their recreation as well as their study. 9. (A) D

III.

Jack has been advised to see a competent physician. A competent physician is one who is able or qualified to do his work well. He is one who:

10. Is more than fifty years old. 10. A (D)
11. Is highly respected by other physicians. 11. (A) D
12. Insists upon body X-rays before prescribing for any patient. 12. A (D)
13. Is so efficient that he never needs to call other physicians into conference in any case, no matter how serious. 13. A (D)

IV.

It is late in March. Esther has lost weight during the winter. She feels tired most of the time and would rather read or talk than play out-of-doors. She is not ill, she says, only tired. Sensible things for girls like Esther to do are:

14. To take bicarbonate of soda after each meal to aid digestion. 14. A (D)
15. To consult a physician. 15. (A) D
16. To do nothing; many high school girls feel that way in the spring. 16. A (D)
17. To take iron to purify the blood. 17. A (D)
18. To take a spring tonic mixed by their mothers or druggists. 18. A (D)
19. To make sure the diet contains plenty of fresh vegetables and milk. 19. (A) D
20. To drink coffee at lunch so they won't feel so tired during the afternoon. 20. A (D)
21. To eat only foods recommended in hospitals for patients recovering from illnesses. 21. A (D)
22. To chew gum after each meal to aid digestion. 22. A (D)

V.

Jack awakened one morning with a very sore throat, a very bad headache, and an upset stomach. Sensible things for Jack to do are:

23. To take castor oil. 23. A (D)
24. To plan to spend the day in bed. 24. (A) D
25. To have his mother call a doctor to find out what the trouble is. 25. (A) D
26. To take a strong pain killer. 26. A (D)
27. To apply a red flannel to his throat. 27. A (D)
28. To plan to go to school where he may feel better. 28. A (D)
29. To apply a mustard plaster to his chest. 29. A (D)
30. To eat light, easily digested meals for a few days. 30. (A) D



# VI.

Mary and Jane are sisters. Mary is cheerful, trustworthy, and friendly. Jane is shy and disagreeable, and frequently indulges in temper tantrums. In general, persons like Mary:

31. Have probably been sick more often than persons like Jane. 31. (A) D X
32. Will probably have more sicknesses in the future than persons like Jane. 32. (A) D X
33. Probably sleep more soundly than persons like Jane. 33. (A) D
34. Probably spend most of their waking time outside of school studying and reading. 34. A (D)
35. Are more likely to cry at a movie than persons like Jane. 35. A (D)
36. Probably enjoy school dramatics more. 36. (A) D
37. Probably worry more just before examinations. 37. A (D)

# VII.

High school boys and girls should maintain the best possible mental and physical health. Here are some sensible things which they might do.

38. Have a monthly physical examination. 38. (A) D X
39. Visit a dentist twice a year. 39. (A) D
40. Never use a public drinking fountain. 40. (A) D X
41. Plan to carry out a program of physical exercise. 41. (A) D
42. Have the blood examined frequently for impurities. 42. A (D)
43. Read and refer to medical books frequently. 43. A (D)
44. Get advice and character analysis from an expert in palm reading. 44. A (D)
45. Wash the hands carefully before each meal. 45. (A) D
46. Brush the hair every day. 46. (A) D
47. Have the ends of the hair singed to prevent "bleeding" and to promote growth. 47. A (D)
48. Be health-conscious every minute of the day. 48. (A) D X
49. Clean the teeth thoroughly at least once a day. 49. (A) D
50. Drink sour milk in preference to sweet milk whenever possible. 50. A (D)
51. Eat slowly. 51. (A) D
52. Take a pain killer, advertised not to affect the heart, at the first signs of headache, toothache, or backache. 52. A (D)
53. Use a mouth wash and throat gargle advertised to kill germs, at least once a day. 53. (A) D X
54. Use a well-advertised hair tonic frequently. 54. A (D)

# VIII.

The tenth grade boys and girls should be interested in developing good habits of posture. Sensible things for them to do to improve their posture are:

55. To engage in activities which develop flexibility of the body muscles. 55. (A) D
56. To wear elastic abdominal supporters. 56. A (D)
57. When walking, to point the toes directly forward. 57. (A) D
58. When walking, to step on the balls (front part) of the feet first, and then shift the weight to the heels. 58. A (D)
59. To stand for hours at a time to strengthen the leg muscles. 59. A (D)
60. To wear shoes without heels as much as possible. 60. A (D)

# IX.

High school boys and girls should be able to judge the soundness of advertisements relating to health. It is important that they should know that certain ideas about health have been proved true on the basis of scientific findings, whereas other ideas, although believed true by many people, are not true. Indicate the statements below with which you agree and those with which you disagree.

61. All people should be vaccinated against smallpox. 61. (A) D
62. Poor health habits can be corrected only by a thorough physical examination and medicines recommended by a competent physician. 62. (A) D X
63. Tuberculosis, cancer, and rheumatism vaccines are widely and successfully used today. 63. A (D)
64. The main purpose of quarantine is to protect the lives of the persons quarantined. 64. A (D)
65. Children are more likely to be healthy if their parents are healthy than if their parents are frequently ill. 65. (A) D
66. A good psychologist can read one's character by studying the shape and curves of the head. 66. A (D)
67. Rheumatism can be cured by tying a dried rattlesnake skin about the affected part. 67. A (D)
68. Overweight people are likely to have more resistance to disease than are persons of normal weight. 68. A (D)
69. Cancer and tuberculosis can frequently be cured if treated early. 69. (A) D
70. Using the mind beyond its normal capacity is likely to result in brain fever or insanity. 70. A (D)



71. A good scientist can foretell a person's future by means of the stars.
72. A man who has lost a leg or an arm in an accident is likely to have a child with a deformed arm or leg.

#### X.

Fred has a keen mind but he is lazy and not always to be relied upon to do things he promises to do. As a result he has been losing friends and is getting low grades. He wants to improve. Sensible things for him to do are:

73. To make weekly resolutions to improve his character.
74. To analyze the characters of his friends in order to discover their faults.
75. To realize that his faults can't be overcome anyway and make the best of it.
76. To confer with persons in whose ability to help him he has confidence.
77. To analyze his faults in order to discover their causes.
78. To say, "Every day in every way I'm getting better and better."
79. To discuss his character with his friends in order to get their opinions.

#### XI.

James has a matter-of-fact attitude toward personal problems. When a problem confronts him he usually finds a satisfactory solution as quickly as possible. After a decision is made he usually puts it out of his mind.

Henry is very conscientious and concerned about his personal problems. When a problem confronts him he thinks about it for a long time, keeps it in mind while at school, while studying, or while playing. He is usually dissatisfied with decisions he makes and feels he should have taken more time to consider them. If he is confronted with a personal problem that he finds he can't solve he thinks about it for a long time, sometimes for months, hoping to find a solution.

In general, persons like James probably

80. Sleep more soundly than persons like Henry.
81. Make wiser decisions than persons like Henry.
82. Are more interested in class trips and games than persons like Henry.

71. A ☒ D

72. A ☒ D

73. A ☒ D

74. A ☒ D

75. A ☒ D

76. A ☒ D

77. A ☒ D

78. A ☒ D

79. A ☒ D

83. Quarrel more.

84. Are more afraid of the dark, of high places, and of electrical storms.

85. Are happier.

86. Work better in a group than persons like Henry.

87. Play better in a group than persons like Henry.

88. Would rather read and study all afternoon and evening than play.

89. Belong to more boys' clubs and organizations.

90. Are more likely to be happy as adults than persons like Henry.

83. A ☒ D

84. A ☒ D

85. A ☒ D

86. A ☒ D

87. A ☒ D

88. A ☒ D

89. A ☒ D

90. A ☒ D

#### XII.

Joe has failed in algebra three times, history once. In general, persons like Joe probably

91. Fail because their teachers do not like them.

92. Had low arithmetic grades in elementary school.

93. Do not like school.

94. Are younger than most of the other pupils in their classes.

95. Get excellent grades in English.

91. A ☒ D

92. A ☒ D

93. A ☒ D

94. A ☒ D

95. A ☒ D

#### XIII.

Food and medical products are often advertised by referring to the results of experimentation of people who are supposed to be scientists. In order to judge the soundness of advertisements it is important that high school boys and girls know the characteristics of a good scientist. A good scientist

96. Is able to read scientific literature in all modern languages.

97. Is able to judge the value of scientific experiments in his field.

98. Believes that when two things happen at the same time, one is the cause of the other.

99. Never expresses an opinion unless he can give the results of scientific experimentation as the basis for his belief.

100. Believes that many things that are now considered true may be proved false tomorrow.

96. A ☒ D

97. A ☒ D

98. A ☒ D

99. A ☒ D

100. A ☒ D

#### TEST I

Typical Schools	L	L	6-0	6-2	6-4	6-5	6-7	6-9	7-2	7-5	7-8	8-2	8-5	8-9	9-2	9-5	9-8	10-2	10-5	10-8
No. Correct	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
Superior Curriculum Schools	L	L	L	L	L	L	L	L	L	L	L	6-0	6-2	6-5	6-8	7-0	7-9	8-2	8-0	8-5
Typical Schools	11-0	11-3	11-5	11-9	12-2	12-4	12-6	12-8	13-0	S	S	S	S	S						
No. Correct	80	81	82	83	84	85	86	87	88	89	90	91	92	and above						
Superior Curriculum Schools	9-0	9-3	9-7	10-0	10-5	11-0	11-3	11-7	12-0	12-3	12-7	13-0	S	S						



## Test II. Personal Economic Competence

Sample:

- |  |  |
|--|--|
| 1. The amount of money a person spends should be governed by his income. | 1. <input type="radio"/> A <input type="radio"/> D |
| 2. Every high school graduate should go to college.                      | 2. A <input type="radio"/> <input type="radio"/> D |

Time: 15 min.

### I.

Jim is especially interested in bookkeeping and has decided that he would like to study to be an accountant. To be well suited for this work he should rate high on these qualities:

- |                                |  |
|--------------------------------|--|
| 1. General intelligence.       | 1. <input type="radio"/> A <input type="radio"/> D |
| 2. Mathematical ability.       | 2. <input type="radio"/> A <input type="radio"/> D |
| 3. Alertness.                  | 3. <input type="radio"/> A <input type="radio"/> D |
| 4. Ability to learn languages. | 4. A <input type="radio"/> <input type="radio"/> D |
| 5. Athletic ability.           | 5. A <input type="radio"/> <input type="radio"/> D |

### II.

Florence and William are leaving high school in three months and then expect to look for work. They have not yet decided what they wish to do. Sensible things for girls and boys like Florence and William to do are:

- |   |   |
|---|---|
| 6. To have their handwriting examined in order to discover their abilities.   | 6. A <input type="radio"/> <input type="radio"/> D  |
| 7. To take tests to measure their vocational abilities.   | 7. <input type="radio"/> A <input type="radio"/> D  |
| 8. To plan to take any job they can get and to change jobs frequently until they find the one which is most suitable.         | 8. <input type="radio"/> A <input type="radio"/> D  |
| 9. To apply for professional positions until they get really good positions.  | 9. A <input type="radio"/> <input type="radio"/> D  |
| 10. To get all the information they can about each of the occupations they might consider entering.                           | 10. <input type="radio"/> A <input type="radio"/> D |
| 11. To take any job, as long as it gives them opportunities to help people in trouble.  | 11. A <input type="radio"/> <input type="radio"/> D |
| 12. To have their probable success in various occupations analyzed, either from their palms or from the shape of their heads. | 12. A <input type="radio"/> <input type="radio"/> D |
| 13. To try to get some money from their families or relatives to set up small businesses.                                     | 13. A <input type="radio"/> <input type="radio"/> D |
| 14. To choose the occupations they thought they would like when they were very young.   | 14. A <input type="radio"/> <input type="radio"/> D |
| 15. To have the stars read to find out those occupations which will be lucky and unlucky for them.                            | 15. A <input type="radio"/> <input type="radio"/> D |
| 16. To enter the occupation in which their friends are engaged.   | 16. A <input type="radio"/> <input type="radio"/> D |

### III.

Some high school boys and girls believe the following statements about vocations. Indicate those with which you agree and those with which you disagree.

- |  |   |
|--|---|
| 17. Boys, on the whole, have occupational interests different from girls.  | 17. <input type="radio"/> A <input type="radio"/> D |
| 18. Persons with physical handicaps can be successful in many vocations.   | 18. <input type="radio"/> A <input type="radio"/> D |
| 19. A bank teller has a better paying job than a locomotive engineer.  | 19. A <input type="radio"/> <input type="radio"/> D |
| 20. An electrical engineer must have a good background in mathematics.   | 20. A <input type="radio"/> <input type="radio"/> D |
| 21. A physician has more need of a good foundation in history than an economist.   | 21. A <input type="radio"/> <input type="radio"/> D |
| 22. A medical student needs a good foundation in chemistry.  | 22. <input type="radio"/> A <input type="radio"/> D |
| 23. Rather than take the job offering the best beginning salary it is often wise to take a job that suits one's interest and ability better but pays less. | 23. <input type="radio"/> A <input type="radio"/> D |
| 24. A good secretarial school devotes all of its attention to developing in its students a mastery of typewriting and shorthand.                           | 24. A <input type="radio"/> <input type="radio"/> D |
| 25. A physician, in order to be successful, must continue to study all his life, even after establishing a good medical practice.                          | 25. <input type="radio"/> A <input type="radio"/> D |

### IV.

Harry's mother has always wanted him to be a lawyer. She worked hard sewing for a living, in order to send him to law school. Whenever he failed in an examination she provided private tutors for him. He tried the bar examinations three times and finally passed them. He is now working as a clerk in a large law office. In general, persons like Harry probably

- |   |   |
|---|---|
| 26. Will be able to give better legal advice than most lawyers.                           | 26. A <input type="radio"/> <input type="radio"/> D |
| 27. Should have chosen some other vocation than law.                                      | 27. <input type="radio"/> A <input type="radio"/> D |
| 28. Should set up law offices of their own as soon as they can borrow the money to do so. | 28. A <input type="radio"/> <input type="radio"/> D |
| 29. Will earn more than \$5,000 per year five years after beginning law practice.         | 29. A <input type="radio"/> <input type="radio"/> D |



30. Will advance more rapidly in the law firm in which they work than the other young lawyers who entered the firm about the same time.
31. Should move to a much better section of the city as soon as their leases expire.
32. Will continue to do clerical work rather than case work in law for many years.

#### V.

John is sixteen years old, in the eighth grade. He does average work in the class. He is underweight and has been out of school a week or more each year because of illnesses. Among the vocations boys like John should probably consider are:

33. Locomotive fireman.
34. Doctor.
35. Bricklayer.
36. Grocery clerk.
37. Chemist.
38. Truckman.
39. Salesman of automobiles.
40. College teacher.
41. Insurance agent.

#### VI.

Ralph receives a weekly allowance and earns money as a delivery boy after school and during vacations. He is supposed to pay for his school supplies, carfare, entertainment, and incidentals. He rarely has enough money, however, and frequently borrows from the other boys. His father pointed out that Ralph has much more money than his chums and suggested that Ralph plan a budget. Sensible ways for boys like Ralph to do this are:

42. To eliminate all expenses for entertainment, candy, and incidentals.
43. To keep a careful record of actual income.
44. To save more than half of their income.
45. To adjust their future budgets at the end of a trial period, in the light of the money spent.
46. To ask their fathers to increase their allowances so they won't have to borrow money.
47. To try to work some extra hours to earn more money.
48. To get their families and friends to pay for them whenever they can.
49. To give all their money to their fathers, asking their fathers for money whenever they want any.
50. To put all their money in a savings bank near home, drawing out each day the amount they will need for one day.

30. A D
31. A D
32. A D
33. A D
34. A D
35. A D
36. A D
37. A D
38. A D
39. A D
40. A D
41. A D

#### VII.

By buying wisely it is possible to get excellent quality without too great a cost. Clothing costs tend to be lower for some people than for others, depending upon various factors. They are likely to be lower for a person who:

51. Purchases at the beginning of the season.
52. Purchases machine-made, rather than handmade clothes.
53. Purchases clothes made in the latest style.
54. Has a very large figure.
55. Purchases at a store that sells only for cash.
56. Runs a charge account, planning to pay each month.
57. Plans a whole season's clothes in advance.
58. Buys everything at one store.

#### VIII.

High school boys and girls are more and more realizing that problems of insurance are of importance to them. Of the following statements about insurance indicate those with which you agree and those with which you disagree.

59. A man who becomes insured at 31 years of age makes lower payments for the same type of insurance than a man who becomes insured at 21 years of age.
60. Straight life insurance provides a lifelong income for the insured person if he is disabled by an accident.
61. An annuity provides a certain sum of money each year to the insured person after a certain age.
62. Only men should be insured.
63. The differences in insurance rates for standard types of insurance from one company to another are small.

#### IX.

The problem of investing or saving money is of particular importance today. Among the direct methods of investing money are:

64. Having one's property mortgaged.
65. Buying government bonds.
66. Placing money in postal banks.
67. Carrying endowment insurance.
68. Having a checking account.
69. Purchasing building and loan stock.



X.

Many high school boys and girls hold the following ideas concerning the costs of food, clothing, and furnishings. Indicate those with which you agree and those with which you disagree.

70. When purchasing an automobile it is generally more economical to pay for it on the installment plan than to pay cash. 70. A ☒ D
71. It is wise to know the various schemes of grading food products. 71. ☒ D
72. Co-operative buying is usually cheaper than other methods of purchasing. 72. ☒ D

XI.

Laura and Richard were discussing the values a college education would have for them. A few of their arguments are given below. Indicate those with which you agree and those with which you disagree.

73. Laura: For a professional position education beyond high school is essential. 73. ☒ D
74. Richard: A bright boy or girl can learn more about a job on the job than in college. 74. ☒ D
75. Laura: Any high school boy or girl would be successful in a profession if he or she had enough education. 75. ☒ D

TEST II

Typical Schools	6-0	6-2	6-4	6-5	6-7	6-8	7-0	7-3	7-5	7-8	8-0	8-3	8-5	8-8	9-0	9-3	9-5	9-8	10-0
No. Correct	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
Superior Curriculum Schools	L	L	L	L	L	L	L	L	L	6-0	6-2	6-5	6-8	7-0	7-3	7-5	7-8	8-0	8-3
Typical Schools	10-3	10-5	10-8	11-0	11-5	12-0	12-5	13-0	S	S	S	S							
No. Correct	59	60	61	62	63	64	65	66	67	68	69	70							
Superior Curriculum Schools	8-5	8-8	9-0	9-5	10-0	10-5	11-0	11-5	12-0	12-5	13-0	S							



### Test III. Competence in Family and Community Relationships

Sample:

1. Most children receive their early training in the home. 1. ☒ A ☐ D
2. Most communities in the United States have free educational, library, medical, and recreational facilities for any of their people who wish to use them. 2. A ☒ D

Time: 15 min.

I.

A group of high school boys and girls agreed that the people in a community should be actively interested in community problems. Some of their reasons are given below. Indicate those with which you agree and those with which you disagree.

- |  |  |
|--|--|
| 1. In order to improve the educational system of the community.                  | 1. <input checked="" type="radio"/> A <input type="radio"/> D                                  |
| 2. In order to provide better recreational facilities for the community.         | 2. <input checked="" type="radio"/> A <input type="radio"/> D                                  |
| 3. In order to stamp out certain political parties.                              | 3. <input checked="" type="radio"/> A <input type="radio"/> D <input checked="" type="radio"/> |
| 4. In order to choose better political candidates.                               | 4. <input checked="" type="radio"/> A <input type="radio"/> D                                  |
| 5. In order to prevent people of certain religious beliefs from gaining control. | 5. A <input checked="" type="radio"/> D  |
| 6. In order to reduce the free services for the poor.                            | 6. <input checked="" type="radio"/> A <input type="radio"/> D <input checked="" type="radio"/> |

II.

A member of a certain city council proposed that the city set up and maintain a well-equipped free medical clinic for the city's poor people. Among the arguments which were given for and against such a clinic are those listed below. Indicate those with which you agree and those with which you disagree.

- |   |  |
|---|--|
| 7. People with enough money to pay for doctors' services should not be required to pay taxes in order to give such services free of charge to other people.                 | 7. A <input checked="" type="radio"/> D                        |
| 8. Most people could and would pay if they really needed a doctor's services; a clinic is therefore a waste of the city's money.  | 8. A <input checked="" type="radio"/> D                        |
| 9. Poor people should receive just as much and as competent medical care as they need.  | 9. <input checked="" type="radio"/> A <input type="radio"/> D  |
| 10. The city should pay a small salary for a few inexperienced doctors and nurses to take care of the city's poor free of charge. This would be much cheaper than a clinic. | 10. A <input checked="" type="radio"/> D                       |
| 11. Many more poor children have tuberculosis and other contagious diseases than children from well-to-do families.   | 11. <input checked="" type="radio"/> A <input type="radio"/> D |

III.

A group of high school boys and girls, disturbed by conflicting ideas concerning the value and importance of the home in American life today, decided to study this problem. As a result of their study they came to the conclusion that some of the following ideas were true and some were false. Indicate those with which you agree and those with which you disagree.

- |  |  |
|--|--|
| 12. The main purpose of the American school is eventually to make the home practically unnecessary.                    | 12. A <input checked="" type="radio"/> D                       |
| 13. The best place in which to develop good character is the home.   | 13. <input checked="" type="radio"/> A <input type="radio"/> D |
| 14. Families with small incomes are more likely to have healthy children than families with large incomes.             | 14. A <input checked="" type="radio"/> D                       |
| 15. Families with small incomes are more likely to have honest and truthful children than families with large incomes. | 15. A <input checked="" type="radio"/> D                       |
| 16. If all parents were well-educated, schools would be unnecessary.   | 16. A <input checked="" type="radio"/> D                       |

IV.

Mr. and Mrs. Smith have three children, 18-year-old Jack, 16-year-old Sally, and 13-year-old Mary. They have a car and own their home. All the children are in school. Indicate those of the following statements concerning such families as the Smiths with which you agree and those with which you disagree.

- |  |  |
|--|--|
| 17. Jack should be allowed to use the car any evening his father does not need it for business provided Jack has a driver's license, drives carefully, and takes and calls for his sisters when they go out. | 17. A <input checked="" type="radio"/> D                       |
| 18. Mr. Smith should spend some time each week with his children no matter how tired or busy he is.  | 18. <input checked="" type="radio"/> A <input type="radio"/> D |
| 19. Mr. and Mrs. Smith should always consider the wishes and welfare of their children before their own.   | 19. A <input checked="" type="radio"/> D                       |
| 20. Sally should be encouraged to choose her own clothes.  | 20. <input checked="" type="radio"/> A <input type="radio"/> D |
| 21. All three children should have a regular allowance, whether they work part-time or not.  | 21. <input checked="" type="radio"/> A <input type="radio"/> D |



22. Mrs. Smith should make the rules concerning the children's personal affairs.
23. Mr. Smith should make the rules concerning family financial matters.
24. All three children should help decide what courses to take and when they should quit school, even though their parents have planned professional careers for them.
25. Jack should not be expected to spend as much time with his family as Sally does.
26. Sally and Mary should be at home by 10 p.m. every night; Jack, being a boy and older, should be allowed to stay out as long as he wishes provided he is strong and healthy.
27. Sally should be allowed to entertain her friends in the living room whenever she wishes, unless Jack plans to have a party at home.
28. Sally should spend a large share of her leisure time with Mary.
29. Sally's friends should include both boys and girls.
30. The children should spend most of their leisure time with their friends rather than with one another, since the interests of the various members of the family differ considerably.
31. All five members of the family should help in choosing activities which include the entire family.
32. In selecting clothes, Sally and Jack should consider the opinions of their friends rather than of their family.
33. When the children are at home their interests and wishes rather than those of the parents should determine what radio programs are to be heard.

#### V.

Mrs. James has two children, twelve and fifteen years old, both of whom are under-weight, have poor appetites, and sleep poorly. Sensible things for mothers like Mrs. James to do are:

34. To give the children a well-advertised tonic to improve their appetites.
35. To make sure that the children indulge in no physical activities until their weight is normal.
36. To consult a competent physician.
37. To encourage the children to eat more sweets, fried foods, and other such fattening foods.

22. A ☐ D ☐
23. A ☐ D ☐
24. A ☐ D ☐
25. A ☐ D ☐
26. A ☐ D ☐
27. A ☐ D ☐

28. A ☐ D ☐
29. A ☐ D ☐
30. A ☐ D ☐
31. A ☐ D ☐
32. A ☐ D ☐
33. A ☐ D ☐

38. To serve the children large quantities of food, encouraging them to eat by constantly urging them.
39. To have the children sleep in rooms with dim lights so they won't be afraid when they awake.
40. To plan to have the children go to bed at regular hours, sleep at least nine hours every night, and get up at least an hour before leaving the house for school each morning.
41. To plan to have the children rest for a short time before and after meals.
42. To encourage the children to play strenuously each day so that they will be exhausted at bedtime.
43. To teach the children to relax frequently during the day.

38. A ☐ D ☐
39. A ☐ D ☐
40. A ☐ D ☐
41. A ☐ D ☐
42. A ☐ D ☐
43. A ☐ D ☐

#### VI.

Indicate those of the following statements about family and community problems with which you agree and those with which you disagree.

44. Ideas about right and wrong never change.
45. The lower the family income the larger is the part spent on food, shelter, and clothing.
46. Studies of the effect of movies on children indicate clearly that all movies have a decidedly harmful effect on children under fourteen years of age.
47. Owning one's home is always cheaper than paying rent.

44. A ☐ D ☐
45. A ☐ D ☐
46. A ☐ D ☐
47. A ☐ D ☐

#### VII.

Martha is a hard-working practical person. Her friends say she has a strong character and great strength of will. When she gets an idea or an opinion she almost never changes it. She prepares great quantities of food for each meal. Her family eat in the kitchen because it keeps the rest of the house cleaner. When she finishes her work she visits or goes to a movie.

Jane is considered impractical by Martha's friends because Jane likes things to look pretty and dainty. She does not like to clean so she has someone do her cleaning. She spends a lot of time arranging flowers, decorating her rooms, and shopping for just the things she wants. Most of her furniture and furnishings are not in the latest style. When Jane is through with her housework she reads or studies or attends lectures.

In general, persons like Martha probably

48. Have more education than persons like Jane.

48. A ☐ D ☐



49. Are more broadminded than persons like Jane.
50. Plan their wardrobes more carefully.
51. Have poorer taste than persons like Jane.
52. Are less likely to see a specialist in time of sickness.
53. Are more likely to read good literature.

49. A ☒ D
50. A ☒ D
51. A ☒ D
52. A ☒ D
53. A ☒ D

### VIII.

A family of six living in a city has an income of \$25.00 a week. Sensible things, ordinarily, for such families to do are:

54. Save twenty-five per cent of the income.
55. Eat stews rather than chops.
56. Eliminate all expenses, except those for food, clothing, shelter, and fuel.
57. Plan the family wardrobe for the whole season.
58. Buy a cheap second-hand car.
59. Buy their own home, borrowing for a down payment from a loan company.
60. Have the head of the family insured.

54. A ☒ D
55. A ☒ D
56. A ☒ D
57. A ☒ D
58. A ☒ D
59. A ☒ D
60. A ☒ D

### IX.

A group of high school boys and girls discussed the differences between conditions today and those of twenty-five years ago when their parents were young. Among the statements they made were the following. Indicate those with which you agree and those with which you disagree.

61. Children have more home duties today. 61. A ☒
62. Today a greater proportion of men marry before they are twenty-three years of age. 62. A ☒
63. Today a greater proportion of women marry before they are twenty-one years of age. 63. A ☒
64. Today a greater proportion of women work after they marry. 64. A ☒
65. Today a greater proportion of boys go to work before they are eighteen years of age. 65. A ☒
66. People spend more of their leisure time away from home today. 66. A ☒
67. People are exposed to less propaganda today. 67. A ☒
68. Children attend the movies more frequently today. 68. A ☒
69. A greater proportion of boys and girls go to high school today. 69. A ☒
70. People are more superstitious today. 70. A ☒

### TEST III

Typical Schools	6-0	6-2	6-4	6-6	6-8	7-0	7-3	7-5	7-8	8-2	8-5	8-8	9-2	9-5	10-0	10-5	10-8	11-2	11-5	12-0	12-5	13-0	S	S	S	S
No. Correct	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
Superior Curriculum Schools	L	L	L	L	L	L	6-0	6-3	6-5	6-8	7-0	7-3	7-5	8-0	8-5	8-8	9-2	9-5	10-0	10-5	11-0	11-5	12-0	12-5	13-0	S



## Test IV. Social-Civic Competence

Sample:

1. Two of the political parties in the United States today are the Republican and Democratic parties. 1. ☒ A ☐ D
2. No women are employed in factories today. 2. ☐ A ☒ D

Time: 25 min.

### I.

One of the important problems in a country like ours which attracts so many immigrants, is helping the immigrants and their children to learn our language and customs. The Americanization of foreigners is helped by

1. Evening schools for adults. 1. ☒ A ☐ D
2. Community recreation halls. 2. ☒ A ☐ D
3. Segregation of foreigners in separate districts. 3. ☐ A ☒ D
4. Public nursery schools and kindergartens. 4. ☒ A ☐ D

### II.

The rights, privileges, and conditions of people under different forms of government differ considerably. Americans generally agree that the most desirable form is a democratic system of government. The following are characteristic conditions under a democratic form of government.

5. Everyone has the same income. 5. ☐ A ☒ D
6. Adult citizens have the right to vote. 6. ☒ A ☐ D
7. Persons who speak against the officials of the government are either deported or imprisoned. 7. ☐ A ☒ D
8. Only persons who pay property taxes have a right to hold local office. 8. ☐ A ☒ D
9. Newspapers are permitted to print news which is unfavorable to the government. 9. ☐ A ☒ D
10. There are only two political parties. 10. ☐ A ☒ D
11. The government takes no part in the economic affairs of the nation. 11. ☐ A ☒ D

### III.

A group of high school pupils listed a few of the qualities, beliefs, and acts generally believed to characterize a good citizen of the United States today. Indicate those with which you agree and those with which you disagree. A good citizen

12. Believes that his country can do no wrong. 12. ☐ A ☒ D
13. Always votes a "straight ticket"; that is, for all candidates of the same political party. 13. ☐ A ☒ D
14. Believes that all who really want to work can find work. 14. ☐ A ☒ D

15. Studies current national and international problems. 15. ☒ A ☐ D

16. Believes that people whose ideas of government are radically different from his own should be freely allowed to express their views. 16. ☒ A ☐ D

17. Believes that all radicals in the United States today are agents of those foreign countries who seek to destroy our government. 17. ☐ A ☒ D

### IV.

Some high school pupils disagreed among themselves concerning who should be allowed to hold political office under a democracy. Of the following groups of people, indicate those you think should and those you think should not be allowed to hold political office.

18. Laborers. 18. ☐ A ☒ D
19. Industrialists. 19. ☐ A ☒ D
20. People with high ideals of government and politics. 20. ☒ A ☐ D
21. Aliens. 21. ☐ A ☒ D
22. Criminals. 22. ☐ A ☒ D
23. College professors. 23. ☒ A ☐ D
24. Farmers. 24. ☒ A ☐ D

### V.

It was just before a presidential election. Charles and Ann disagreed concerning the candidate they thought would be elected so they decided to study the political interests and trends in the country. They changed their minds concerning some of the following which were among the ideas they had originally held. Indicate those with which you agree and those with which you disagree.

25. The majority of southern farmers are Republican. 25. ☐ A ☒ D
26. Communists and socialists are more numerous in industrial regions than in farming regions. 26. ☒ A ☐ D
27. Since the Civil War, Democratic candidates for the presidency have been more often elected than Republican candidates. 27. ☒ A ☐ D
28. Most newspapers take sides by favoring a certain candidate before election. 28. ☒ A ☐ D



# VI.

Among the statements made by a group of high school pupils, in discussing the causes and effects of past wars, were the following. Indicate those with which you agree and those with which you disagree.

29. The United States will probably not be affected by any more wars. 29. A ☒ D
30. Our government's attitude toward a particular foreign nation may change from friendliness to hostility within a few months. 30. A ☒ D
31. During times of economic depression a war is justifiable since it puts the unemployed to work, either fighting, or producing arms, clothing and food for the soldiers. 31. A ☒ D

# VII.

Problems of labor and of labor organizations affect all Americans and are therefore of importance to high school pupils. The American Federation of Labor, an important labor organization, aims to:

32. Raise wages of the workingman. 32. A ☒ D
33. Abolish profits in industry. 33. A ☒ D
34. Destroy democracy. 34. A ☒ D
35. Alter radically the United States Constitution. 35. A ☒ D
36. Establish a labor party. 36. A ☒ D

# VIII.

American wage-workers, on the whole,

37. Object to immigration because foreigners work for lower wages. 37. A ☒ D
38. Readily accept foreign workers into their trade unions. 38. A ☒ D
39. Have succeeded in passing immigration restriction laws. 39. A ☒ D
40. Feel superior to alien workers. 40. A ☒ D

# IX.

Below are a few things, some of which have changed considerably within the last one thousand years and some of which have not. Indicate those you think have changed a great deal during that time and those you think have not.

41. Ideas about what is moral. 41. A ☒ D
42. Man's physical strength. 42. A ☒ D
43. Religious beliefs. 43. A ☒ D
44. The height of mountains. 44. A ☒ D
45. Home life. 45. A ☒ D
46. Habits of work. 46. A ☒ D

# X.

Because of increased facilities in transportation and communication most of the nations of Europe and America have many similar conditions. In most of these nations

47. There are many debtors and creditors. 47. A ☒ D
48. Governmental budgets are balanced each year. 48. A ☒ D
49. Railroads are well developed. 49. A ☒ D
50. The government is rarely in debt. 50. A ☒ D
51. Steam and electricity are widely used for industrial purposes. 51. A ☒ D
52. Armies and navies are gradually being decreased. 52. A ☒ D
53. All payments for imports are made in gold, silver, or other precious metal. 53. A ☒ D
54. Customs duties on imports yield a sufficient revenue to pay most of the governmental expenses. 54. A ☒ D
55. The standard of living of the people is higher than in the nations of the other continents. 55. A ☒ D
56. Working conditions of the people in one country definitely affect those of the people in other countries. 56. A ☒ D
57. Economic difficulties in one country considerably affect conditions in the other countries. 57. A ☒ D

# XI.

A high school class, as a result of studying the problem of delinquency and crime in the United States today, agreed that some of the following methods would probably help in the prevention of delinquency and crime and that others would not. Indicate those you think would help and those you think would not.

58. Awarding the death penalty for all serious crimes. 58. A ☒ D
59. Improving the economic conditions of the poorer classes. 59. A ☒ D
60. Forcing prisoners to do hard work. 60. A ☒ D
61. Increasing the hours of work of laborers. 61. A ☒ D
62. Imprisoning all persons convicted of any crime, that is, abolishing the practice of sometimes suspending sentence. 62. A ☒ D
63. Doing away with slums. 63. A ☒ D

# XII.

Because business depressions affect them and their future so seriously high school pupils should understand the cause of such depressions. Among the factors contributing markedly to the occurrence of the depression in the United States during the years from 1929 on, were:

64. The World War. 64. A ☒ D
65. The American Federation of Labor. 65. A ☒ D



66. The American Legion.
67. Economic depressions in other countries.
68. Unsound expansion of credit.
69. Increased government control of production.
70. Lack of balance between production and distribution.
71. Labor strikes and disputes.
72. Revolution in Cuba.

66. A ☐ D ☒
67. A ☒ D ☐
68. A ☒ D ☐
69. A ☐ D ☒
70. A ☐ D ☒
71. A ☐ D ☒
72. A ☐ D ☒

### XIII.

Following are some statements concerning present-day economic problems which are of particular importance to high school pupils today. Indicate those with which you agree and those with which you disagree.

73. If the income of all millionaires were reduced to \$4,000 per year, unemployment would be abolished.
74. If all people were consistently more thrifty there would be no poverty.
75. People's attitudes and thinking are influenced to a large degree by economic conditions.
76. When the prices of certain foods rise rapidly substitutes for most of them come into widespread use.
77. If taxation were considerably decreased the average man would have a much higher standard of living.
78. Consumer co-operatives aid in setting standards of quality and wages.
79. Enough food is produced in the United States today to feed all its people adequately.

73. A ☐ D ☒
74. A ☐ D ☒
75. A ☐ D ☒
76. A ☐ D ☒
77. A ☐ D ☒
78. A ☐ D ☒
79. A ☐ D ☒

### XIV.

An appreciation of the factors which affect food prices will aid you in understanding certain political and social problems. Some of the factors which tend to lower the price of food are:

80. A decrease in the cost of farm machinery.
81. Crop reduction.
82. Increasing the purchasing power of the dollar.
83. Droughts.
84. Decreased transportation charges.
85. Increased marketing charges.
86. Scarcity of farm hands.

80. A ☐ D ☒
81. A ☐ D ☒
82. A ☐ D ☒
83. A ☐ D ☒
84. A ☐ D ☒
85. A ☐ D ☒
86. A ☐ D ☒

### XV.

The following are considered socially desirable by most American high school pupils today. Some of them have not yet been achieved, however. Some of them have been achieved in only certain sections of the country. Some have been achieved in all parts of the United States as a result of amendments to the United States Constitution. Indicate those which you think came about as a result of amendments to the Constitution and those which you think did not.

87. Abolition of slavery.
88. Unemployment insurance.
89. Universal compulsory elementary and high school education.
90. The right to collective bargaining between employer and employee.
91. Minimum wages for laborers.
92. Authorization to levy federal income taxes.
93. Minimum hours of labor for laborers.
94. Workmen's compensation.
95. Woman suffrage.
96. Peace pacts with Latin American countries.
97. Power to Congress to limit Wall Street speculation.

87. A ☐ D ☒
88. A ☐ D ☒
89. A ☐ D ☒
90. A ☐ D ☒
91. A ☐ D ☒
92. A ☐ D ☒
93. A ☐ D ☒
94. A ☐ D ☒
95. A ☐ D ☒
96. A ☐ D ☒
97. A ☐ D ☒

### XVI.

Current problems of American industry face high school pupils every day. A study of the trends in industry during the past century will help you to gain a better understanding of the nature of present-day industry. Compared with industry one hundred years ago:

98. A smaller percentage of businesses are now owned by a single person or family.
99. Financiers now have more control of manufacturing industries.
100. The farmer now has more influence in industrial policies.
101. Production has increased more than twenty-fold.
102. There is now a larger proportion of small competitive factories.
103. Laborers are now more plentiful.
104. New markets for goods are now more plentiful.

98. A ☐ D ☒
99. A ☐ D ☒
100. A ☐ D ☒
101. A ☐ D ☒
102. A ☐ D ☒
103. A ☐ D ☒
104. A ☐ D ☒

### XVII.

Many changes have taken place in American life since the beginning of our nation. Compared with one hundred years ago:

105. The average size of families is greater today.
106. Belief in fortune telling is greater today.

105. A ☐ D ☒
106. A ☐ D ☒



107. The proportion of infant deaths is greater today. 107. A D
108. The standard of living of the average man is higher today. 108. A D

### XVIII.

An understanding of the nature of our economic system today is important for the appreciation of many important social problems. Indicate those of the following statements you agree are true and those you believe are not true.

109. Our economic system is controlled by fewer than twenty financiers. 109. A D
110. It is based on profit to the owners of business and industry. 110. A D
111. It must have for its success a high level of purchasing power in the population in general. 111. A D
112. Advertising is becoming more and more widespread. 112. A D
113. Natural resources are used only as their use benefits the nation as a whole. 113. A D
114. Everyone has an equal chance, economically, to become wealthy. 114. A D
115. The proportion of very wealthy people is increasing. 115. A D
116. Our economic system results in periods of prosperity and depression. 116. A D

### XIX.

Following are a few of the ways by which some high school pupils believe that national prosperity may be increased. Indicate those you agree are likely, and those you think are not likely, in the long run, to increase national prosperity.

117. Using natural resources as rapidly as possible. 117. A D
118. Conserving human life. 118. A D
119. Government prevention of organization by labor. 119. A D
120. A minimum of governmental control over industry. 120. A D

### XX.

Most American communities, urban (city) and rural (farm), have grown up with little or no planning. This problem of planning is of particular importance to high school boys and girls today. Indicate those of the following statements with which you agree and those with which you disagree.

121. City planning would necessarily increase taxation considerably. 121. A D
122. Rural planning involves a closer grouping of farm houses than is common today. 122. A D
123. City planning includes the improvement of methods of transportation. 123. A D
124. Rural planning would result in better educational facilities for farm people. 124. A D
125. City planning would include building houses away from streets. 125. A D

### TEST IV

Typical chools	6-0	6-1	6-2	6-3	6-5	6-6	6-7	6-8	6-9	7-0	7-2	7-4	7-5	7-7	7-8	7-9	8-0	8-1	8-3	8-5	8-7	8-9	9-0	9-2	9-3	9-5
No. Correct	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
Superior Curriculum Schools	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	6-0	6-1	6-3	6-5	6-7	6-9	7-0	7-2	7-3	7-5
Typical Schools	9-7	9-9	10-1	10-3	10-5	10-7	10-9	11-0	11-2	11-3	11-5	11-7	11-9	12-0	12-2	12-3	12-5	12-7	12-9	13-0	S	S	S	S	S	
No. Correct	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	
Superior Curriculum Schools	7-7	7-9	8-1	8-3	8-5	8-8	9-0	9-3	9-5	9-8	10-0	10-3	10-5	10-8	11-0	11-3	11-5	11-8	12-0	12-3	12-5	12-8	13-0	S	S	





# WASHBURNE S-A INVENTORY

(Thaspic Edition)

By JOHN N. WASHBURNE, PH.D., Syracuse University, Syracuse, New York

## STUDENT'S RECORD

DIRECTIONS. Fill in the following blanks and answer the questions fully and frankly. Leave no blank spaces. All answers to this Inventory will be kept strictly confidential, to be used only by your advisers for your benefit.

Your name..... Boy or girl..... Present date.....  
First name Middle name Last name

City..... Name of your school..... Grade you are in.....  
Where your school is located

Place of birth..... Date of birth..... Age last birthday..... years  
City, state, and nation where you were born Month Day Year

(a) When you are not away at school, do you live at home with *both* your parents?.....

(b) If not, with whom do you live? (Father, mother, aunt, uncle, guardian, etc.).....

(c) What is your father's occupation when employed? Explain fully.....

(d) Is your father employed now?..... If not, how long has he been unemployed?.....

(e) Does your mother *seek* or *have* wage-earning work?..... If so, what?.....

(f) Is your mother employed now?..... If not, how long has she been unemployed?.....

(g) How many brothers and sisters do you have?..... How many of them live at home?.....

(h) How many brothers and sisters living in your home help support themselves by their earnings?.....

(i) What grade in school did your father finish?..... your mother?.....

(j) How many rooms has your home, not counting closets and bathrooms?.....

(k) Do your parents take in roomers?..... If so, how many?.....

(l) Do your folks have a telephone?..... a passenger automobile (not a truck)?.....

(m) Have you decided what occupation you would like to follow when through school?.....

(n) If so, what?.....

Are you studying for this work?.....

(o) Are you practicing for this work now?..... If so, about how many hours a week?.....

(p) Do you do steady work for pay?.....

If so, what?.....

For whom?.....

Now turn this page and look at page 1 of the Question Booklet. Read the Explanation and Directions on that page very carefully. Be sure that you understand them before you try to answer the questions.

Do not write in this boxed-off space.

### PROFILE CHART

Percentile Rank	100 - 98	97-91	90-75	74-51	50	49-26	25-10	9 - 3	2 - 0	Retest	
Levels	Exc.	Sup.	W-A	NORM.			L.N.	Bor.	Mal.		
IQ	J.H. H.S. Col. 160-135 160-140 160-145	134-125 133-130 144-135	124-115 129-120 134-125	114-106 119-111 124-116	105 110 115	104-100 109-101 114-106	99-86 100-91 105-100	85-76 90-81 99-95	75-55 80-60 94-90		
Soc.-Ec. Status											
Sch. Standing											
t	Score	J.H. H.S. Col.	0 0 0	1-6 1-6 1-6	7-11 7-10 7-9	12 11 10	13-23 12-19 11-15	24-30 20-26 16-20	Discard 27-30 21-30	Discard	
h		J.H. H.S. Col.		0	1-2 3	4-5 6	6-11 12	12-19 20	20-30		
a		J.H. H.S. Col.	0-2 0-2 0-2	3-7 3-6 3-5	8-17 7-13 6-9	18 15 10	19-29 23-27 11-25	30-34 28-35 16-23	35-100 36-100 24-33		
s		J.H. H.S. Col.	Girls Boys 0-3 0-3	1-3 4-8	4-8 9-12	9 13	10-13 14-18	14-18 9-30	19-26 31-37	27-70 38-70	
p		J.H. H.S. Col.	20-31 20-27 20-23	32-38 33-32 24-26	39-42 33-39 27-33	43-57 40-48 34-39	58-69 50-59 41-49	70-79 60-67 50-55	80-93 68-81 56-69	94-116 102-116 70-116	
i		J.H. H.S. Col.		0-1 2-3	2-3 4	4 5	5-6 7-9	10-12 10-12	13-30		
c		J.H. H.S. Col.		0 1-5 0	6-13 6-11 6-9	14 12 10	15-19 18-17 11-15	20-24 22-23 16-20	25-29 27-28 21-25	30-50 50-50 26-50	
SUBTOTAL		J.H. H.S. Col.	20-49 20-46 20-43	50-63 47-60 44-57	64-96 61-91 58-86	97-111 92-106 87-101	112 107 102	113-124 108-119 103-114	125-157 120-149 115-141	158-207 150-199 142-191	208-466 200-466 192-466
w (Subtract)		J.H. H.S. Col.	50-30 50-30 50-30	29-16 29-16 29-16	13-9 15-11 17-13	8-5 10-8 12-11	4 7 10	3-1 6-3 9-5	0 2-0 4-2	1-0	
TOTAL		J.H. H.S. Col.	0-50 0-40 0-40	51-70 41-60 31-50	71-90 61-80 51-70	91-109 81-99 71-89	110 100 90	111-129 101-119 91-109	130-154 150-199 145-194	155-204 200-466 195-466	

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# WASHBURNE S-A INVENTORY

## QUESTION BOOKLET

Place this page number beside the "Page 1" on your Answer Sheet. **Page 1**

Before answering any questions read carefully all the following EXPLANATION and DIRECTIONS.

**EXPLANATION.** In order that your advisers may help you in the best possible way, it is necessary for them to know something of your likes and dislikes, personality and habits. It has been found that some of the brightest persons have social and personality difficulties which can often be overcome if the difficulties are known to those who can offer suitable counsel and opportunities. It will therefore be to your own advantage to answer the questions as truthfully as possible.

This is not an examination. It is not a test in any sense, because there are no right and wrong answers. Some of the questions may seem trivial or childish, but answer them as best you can anyway, because it is necessary to have the same interpretation scheme for persons of all ages.

**DIRECTIONS.** To answer the questions in the Questionnaire beginning below, tear off very carefully the Answer Sheet (the page just before this one) and place it under this booklet so that the column marked 1 projects at the right. The large figure 1 at the top of the Answer Sheet should be near the large figure 1 in the corner of this page. Then answer the questions as shown in the samples. If you are given a separate Answer Sheet, use that in the same way.

Look at the sample question: "Do you enjoy eating?" Assuming your answer is Yes, you would make a heavy mark under "Yes" on the Answer Sheet, as shown.

If your answer were No, you would put a heavy mark in the space under "No" on the Answer Sheet. That is the way you are to answer the questions. It is not necessary to write anything. Just make a *heavy* and *solid* mark in the space under "Yes" or "No."

**CAUTION!** Answer ALL the questions carefully. If a question should read: "Did you ever smoke?" the answer No would mean "No, never." If you had smoked even once it would be necessary to make a mark under "Yes." There is no way to answer such a question by indicating "seldom" or "only once." You may find it difficult to follow this rule, but it is important to do so. When a question says "never" or "ever," it means exactly that.

When such words as "often" and "sometimes" are used in a question, without further explanation, make as sensible a guess as you can as to what they mean.

It should not take more than thirty or forty minutes to answer all the questions. **BE SURE THAT YOU DON'T SKIP ANY.** All the questions must be answered exactly as directed so that this paper may be scored and classified by machinery. Although some of the questions are more suitable for adults and some are more suitable for young children, they must *all* be answered carefully by *everyone*. Mark your answer *strongly*.

### QUESTIONNAIRE

- Sample.** Do you enjoy eating? ..... s
1. Do you like dogs? ..... 1
2. Do you like horses? ..... 2
3. Do you like babies? ..... 3
4. Did you ever cry because someone hurt you? ..... 4
5. Did you ever cry because you saw someone else hurt? ..... 5
6. Do you always report other people whom you see cheating? ..... 6
7. Did you ever tell a lie? ..... 7
8. Do you always report the number of a car you see speeding? ..... 8
9. Do you like to hunt or kill animals for sport? ..... 9
10. Did you ever act greedily by taking more than your share of anything? ..... 10
11. Do you always smile when things go wrong? ..... 11
12. Did you ever cry at a movie? ..... 12



119. Do you often enjoy your work more than you play? ..... 119  
120. Which would you rather have, (1) great riches without any important work to do, or (2) interesting and important work that brings you only a comfortable income? ..... 120

121. Do you have the habit of leaving a lot of tasks unfinished? ..... 121  
122. If you could have *ten* of the following wishes but *only* ten, which would you choose? If you have already mentioned some of these things in your written wishes, it makes no difference; choose them again if you still prefer them to other things in the list. [Put a mark on the Answer Sheet after *each* of the ten things which you choose. Be sure to mark *ten* choices, but *only* ten.] ..... 122

a. To have an automobile, a speedboat, an airplane. (Any, or all three.) ..... a

b. To have athletic skill. .... b

c. To be successful in your work. .... c

d. To be famous. .... d

e. To have plenty of amusement, thrills. .... e

f. To have ability, talent. .... f

g. To have good looks, personality. .... g

h. To have no school. .... h

i. To read books. .... i

j. To live somewhere else. .... j

k. To have peace and quiet. .... k

l. To have important and interesting work. .... l

m. To have a good-looking and romantic sweetheart. .... m

n. To have a good education. .... n

o. To help get rid of the suffering and injustice in the world. .... o

p. To inherit a million dollars. .... p

q. To have many true friends. .... q

r. To be brave, truthful, loyal, and kind. .... r

s. To travel widely. .... s

t. To be able to help your family and friends. .... t

u. To have a happy marriage and good, bright children. .... u

v. To have lots of good luck. .... v

w. To succeed in ..... w

x. To be well-dressed and popular. .... x

(If you choose item w, write in any special thing you want to succeed in and also mark the Answer Sheet.)

The end.



13. Did you ever pretend that you did not hear when someone called you?..... 13
  14. Did you ever cry over a book or a story?..... 14
  15. If you had no other choice, would you rather (1) marry a rich person whom you didn't love, or (2) marry a poor person whom you loved very much? [Mark your Answer Sheet under 1 (rich) or 2 (poor).]..... 15
  16. Did you ever break or lose anything which belonged to someone else?..... 16
  17. Did you ever feel that you would like to get even with somebody for something he had done?..... 17
  18. Did you ever pretend to understand something when you did not understand it?..... 18
  19. Do you like to tease or make fun of people until they cry?..... 19
  20. Did you ever take anything, even a pin or a button, that belonged to someone else?..... 20
  21. Do you make friends easily?..... 21
  22. Are you always on time for school and for all other appointments?..... 22
  23. Which would you rather have, (1) a real good friend or (2) \$50? [Mark under 1 or 2 on the Answer Sheet to show which you would rather have.]..... 23
  24. Do you always finish your work before you play?..... 24
  25. When you were in elementary school, did you always try to make the other children keep quiet when the teacher was out of the room?..... 25
  26. Did you ever say anything about your teacher behind her back that you would not say to her face?..... 26
- 2➔**
27. Did you ever hurt an animal for fun?..... 27
  28. Were you ever rude or saucy to anyone?..... 28
  29. Do your friends call you a tease?..... 29
  30. When you see others of about your own age fighting, do you always stop them?..... 30
  31. If you had a free ticket to go to see a murderer hung, would you go?..... 31
  32. Have you always obeyed promptly and cheerfully the people you were supposed to obey?..... 32
  33. Did you ever get a pleasant feeling from seeing anyone happy?..... 33
  34. Did you ever tell on another child for something wrong he had done?..... 34
  35. When you see other people sad, does it usually make you sad?..... 35
  36. If there is no one around to see you, do you always pick up the paper and trash that others have thrown on the floor?..... 36
  37. Do you ever like to see other people in trouble because it makes you feel good to see how much better off you are?..... 37
  38. Do you always pick up broken glass when you see it in the street, so that people won't puncture their tires? .. 38
  39. Do you sometimes enjoy the sight of an animal or a person being hurt?..... 39
  40. Do you sometimes get so angry that you hardly know what you are doing?..... 40
  41. Are you quick-tempered — that is, do you get mad often? (Several times a week usually.)..... 41



5

93. Do you think many people make quite a lot of fun of you ? . . . . . 93
94. Do people find fault with you more than you deserve ? . . . . . 94
95. Do you feel lonely most of the time even when you are with people ? . . . . . 95
96. Do you often (several times a year) suddenly dislike something you have liked very much ? . . . . . 96
97. Do you feel suspicious of most of the people you know ? . . . . . 97
98. Do you often feel that most of the people you know are against you ? . . . . . 98
99. Do you tire quickly of a good many of your friends ? . . . . . 99
100. Do you feel that you are very different from other people ? . . . . . 100
101. Do you feel that most of the people whom you know fairly well like to have you near them ? . . . . . 101
102. When you meet people for the first time, do you usually feel that they will not like you ? . . . . . 102
103. Do you feel that your parents or guardians expect too much of you ? . . . . . 103
104. Do you often (at least nine or ten times a year) feel that life is not worth living ? . . . . . 104
105. On the whole, do you think you are treated right ? . . . . . 105
106. Do you usually feel that you don't "belong" anywhere ? . . . . . 106
107. When you have work to do, do you usually let it go as long as you can, and then work with all your might ? . . . . . 107
108. After you have decided to do something, do you often (nearly one fourth of the time) change your mind ? . . . . . 108
109. After you have decided to do something, do you often (nearly one fourth of the time) find that you cannot make yourself do it ? . . . . . 109
110. If you could have your choice between these two gifts, which would you take, (1) a very fine automobile (with expenses paid, a driver's license, and knowledge of how to drive) right now, or (2) a million dollars next year ? [Mark under 1 or 2 on the Answer Sheet.] . . . . . 110
111. Suppose you had to go to prison, and the judge said to you, "If you go to prison right away you will have to stay only five years and when you get out you can finish your education without its costing you any more than it does now. But if you want to go to prison, you can have ten years of freedom right now. But after that you will have to go to prison for ten years instead of five." If you knew you had to go at one time or the other and that you could not possibly escape, which would you choose, (1) five years of prison now, or (2) ten years of prison later ? . . . . . 111
112. Do you often (several times a week) become so excited or angry that you can't keep still even though you want to ? . . . . . 112
113. Are you often (almost every day) bothered by not being able to get rid of some useless thoughts that keep coming into your mind ? . . . . . 113
114. Do you get tired of work quickly ? . . . . . 114
115. Do you usually plan your work ahead ? . . . . . 115
116. Are you lazy most of the time ? . . . . . 116
117. Do you often (several times a year) get into trouble because of doing something on impulse (but not in anger) ? . . . . . 117
118. Do you usually carry out your plans ? . . . . . 118



42. Do you like to fight? (Not just a play fight, but *a real fight with fists or words*.) ..... 42
43. Are you happy most of the time? ..... 43
44. Do you feel that nobody loves you? ..... 44
45. Do you feel that nobody quite understands you? ..... 45
46. Do your feelings keep changing from sad to happy and from happy to sad without your knowing why? ..... 46
47. Do you feel unhappy most of the time? ..... 47
48. Do people hurt your feelings very often — that is, almost every day? ..... 48
49. Do you almost always feel painfully self-conscious when you are among people you don't know very well? ... 49
50. About how many teachers have you disliked (or hated) very much? [Answer by marking under *a, b, c, d*, or *e* on the Answer Sheet. (*a*) none, (*b*) 1 to 3, (*c*) 4 to 6, (*d*) 7 to 10, (*e*) over 10.] ..... 50
51. About how many other people have you disliked (or hated) very much? [Show your answer as follows: (*a*) none, (*b*) 1 to 3, (*c*) 4 to 10, (*d*) 11 to 50, (*e*) over 50.] ..... 51
52. Which one of the following statements is true of you: (1) On an average, I am very happy. (2) On an average, I am fairly happy. (3) On an average, I am neither happy nor unhappy. (4) On an average, I am somewhat unhappy. (5) On an average, I am very unhappy. [Mark under either 1, 2, 3, 4, or 5.] ..... 52
53. How many times in the last year have you wanted to run away from home or from your present circumstances? [Show your answer as follows: (*a*) none, (*b*) 1 to 5, (*c*) 6 to 15, (*d*) 16 to 100, (*e*) over 100.] ..... 53
54. Has your family almost always treated you right? ..... 54
- 3** →
55. About how many good friends have you now whom you can really trust? [Show your answer as follows: (*a*) none, (*b*) 1 or 2, (*c*) over 2.] ..... 55
56. About how many good friends have you ever had whom you could really trust? [Show your answer as follows: (*a*) none, (*b*) one, (*c*) 2 to 5, (*d*) over 5.] ..... 56
57. Do you usually let yourself go when angry? ..... 57
58. Are you often (several times a week) late for work, school, or meals? ..... 58
59. Do you often become interested in the people you meet? ..... 59
60. Do you often feel self-conscious because of your personal appearance? ..... 60
61. Do you think most people regard you as queer? ..... 61
62. Would you like to see the people who have been extremely mean to you lose an arm or a leg? ..... 62
63. Do you like to see dogfights? ..... 63
64. Which would you prefer, (1) to be very popular but not to have any very close friends, or (2) to have only a few close friends? [Mark under 1 or 2 on the Answer Sheet.] ..... 64
65. Do you often feel almost as bad about other people's troubles as about your own? ..... 65
66. Do you often (almost every day) put off doing things that you should do, and then afterward feel sorry that you did put them off? ..... 66
67. When you get some money, what do you usually do, (1) spend it all at once, or (2) make it last a long time? ... 67
68. About how many times a year do you make resolutions? [Answer by marking under *a* or *b* as follows: (*a*) less than 10 times, (*b*) 10 or more times.] ..... 68
69. Do you keep most of your resolutions? ..... 69



70. Which would you prefer, (1) a good automobile (and its upkeep) right now, or (2) \$20,000 ten years from now? [Mark under 1 or 2 on the Answer Sheet.]

71. Which would you prefer, (1) a job with fairly good wages (enough for a family to live on) and very little work, but practically no chance for advancement, or (2) a job with less pay, harder work, and longer hours, but very good chances for advancement after the second or the third year?

72. If for running the same errands you were offered these two choices (by someone you trusted), which would you take, (1) 50¢ a week for ten weeks, or (2) \$10 at the end of ten weeks?

73. If there were no rules against copying other people's work even in examinations, and it was considered a proper thing to do, would you prefer going through school by that means instead of doing the work yourself?

74. If the salary, security, and advancement were the same, which would you prefer, (1) an easy job that was not very interesting, or (2) a hard job that was very interesting?

75. Do you often plan what you will do five or ten years from now?

76. Do you usually feel friendly toward most people?

77. Does it usually take some time before you can grow to like people?

78. Do you very often feel sorry for people who suffer punishment even if you know they have done wrong?

79. Do you usually feel sorry for anybody who is getting the worst of a struggle?

80. Do you feel healthy and well most of the time?

81. Do you have enough excitement?

82. Do you feel restless and discontented most of the time?

83. Does your mind often (nearly every day) wander so badly that you lose track of what you are doing?

84. Do you often (almost every day) eat, drink, or smoke too much?

85. Do you sometimes feel that some mysterious force compels you to do something against your will?

86. How many habits have you that you wish you could break? [Mark under a or b as follows: (a) less than 10, (b) 10 or more.]

87. Do you usually find it hard to concentrate on what you are doing, even for half an hour?

88. Are you aware of any main purpose in your life?

89. What are your three chief wishes? In other words, if you could have any three wishes, but only three, come true, what would they be? The only thing you cannot wish for is more wishes. [Write your answers in the space after 89 on the Answer Sheet. See the column at the right side of the page.]

90. What other things would you wish for, if you were told (and believed) that you would be granted everything that you could write down clearly in three minutes? You are also told (and believe) that after the three minutes are up you cannot change your mind, but must accept whatever you have wished for. When you have finished reading these directions start timing yourself immediately, without thinking about the wishes first. If you have no watch or clock, guess the time as nearly as you can. [Write your other wishes after 90 in the right-hand column of the Answer Sheet.]

Many persons have some SUPPRESSED DESIRES — things they would like to see come true, but which they do not let themselves wish for or try to make happen, because of their own conscience or because of what other people might think. About how many such suppressed desires do you recognize in yourself? [Write the number after 91 on the Answer Sheet.]

92. Write down as many of these suppressed desires as you are willing to make known to your advisers. (It may help them very much in understanding your needs.) [Write after 92 on the Answer Sheet.]

Go right on to page 5.



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